

1 [JScript] function PreAuthenticate(request : WebRequest, credentials :
2 ICredentials) : Authorization;

3
4 *Description*

5 Returns an instance of the **System.Net.Authorization** class for an
6 authentication request to a server.

7 *Return Value:* An **System.Net.Authorization** instance containing the
8 authorization message for the request.

9 When the **System.Net.IAuthenticationModule.CanPreAuthenticate**
10 property is **true** , the
11 **System.Net.IAuthenticationModule.PreAuthenticate(System.Net.WebRequest**
12 **,System.Net.ICredentials)** method will return an instance of the
13 **System.Net.Authorization** class containing an authentication message. The
14 **System.Net.WebRequest** instance associated with the authentication request. The
15 credentials associated with the authentication request.

16 ICertificatePolicy interface (System.Net)

17 PreAuthenticate

18
19
20 *Description*

21 Validates a server certificate.

22 The **System.Net.ICertificatePolicy** interface is used to provide custom
23 security certificate validation for an application. The default policy is to allow
24 valid certificates, as well as valid certificates that have expired. To change this
25 policy, implement the **System.Net.ICertificatePolicy** interface with a different

policy, and then assign that policy to

System.Net.ServicePointManager.CertificatePolicy .

CheckValidationResult

[C#] bool CheckValidationResult(ServicePoint srvPoint, X509Certificate
certificate, WebRequest request, int certificateProblem);

[C++] bool CheckValidationResult(ServicePoint* srvPoint, X509Certificate*
certificate, WebRequest* request, int certificateProblem);

[VB] Function CheckValidationResult(ByVal srvPoint As ServicePoint, ByVal
certificate As X509Certificate, ByVal request As WebRequest, ByVal
certificateProblem As Integer) As Boolean

[JScript] function CheckValidationResult(srvPoint : ServicePoint, certificate :
X509Certificate, request : WebRequest, certificateProblem : int) : Boolean;

Description

Validates a server certificate.

Return Value: **true** if the certificate should be honored; otherwise, **false** .

The

System.Net.ICertificatePolicy.CheckValidationResult(System.Net.ServicePoint, System.Security.Cryptography.X509Certificates.X509Certificate, System.Net.WebRequest, System.Int32) method implements the application certificate validation policy. The method can examine the *srvPoint* , *certificate* , *request* , and *certificateProblem* parameters to determine whether the certificate should be honored. The **System.Net.ServicePoint** that will use the certificate. The certificate

1 to validate. The request that received the certificate. The problem encountered
2 when using the certificate.

3 ICredentials interface (System.Net)

4 CheckValidationResult

5
6
7 *Description*

8 Provides the base authentication interface for retrieving credentials for Web
9 client authentication.

10 The **System.Net.ICredentials** interface provides the
11 **System.Net.ICredentials.GetCredential(System.Uri, System.String)** method to
12 objects that supply network credentials to applications.

13 GetCredential

14
15 [C#] NetworkCredential GetCredential(Uri uri, string authType);

16 [C++] NetworkCredential* GetCredential(Uri* uri, String* authType);

17 [VB] Function GetCredential(ByVal uri As Uri, ByVal authType As String) As

18 NetworkCredential

19 [JScript] function GetCredential(uri : Uri, authType : String) : NetworkCredential;

20
21 *Description*

22 Returns a **System.Net.NetworkCredential** object that is associated with
23 the specified URI, and authentication type.

24 *Return Value:* The **System.Net.NetworkCredential** associated with the specified
25 URI and authentication type, or if no credentials are available, **null** .

The **System.Net.ICredentials.GetCredential(System.Uri,System.String)** method returns a **System.Net.NetworkCredential** instance that contains the credentials associated with the specified URI and authorization scheme. When no credentials are available, the **System.Net.ICredentials.GetCredential(System.Uri,System.String)** method returns **null**. The **System.Uri** that the client is providing authentication for. The type of authentication, as defined in the **System.Net.IAuthenticationModule.AuthenticationType** property.

IPAddress class (System.Net)

GetCredential

Description

Provides an Internet Protocol (IP) address.

The **System.Net.IPAddress** class contains the address of a computer on an IP network.

GetCredential

[C#] public static readonly IPAddress Any;

[C++] public: static IPAddress* Any;

[VB] Public Shared ReadOnly Any As IPAddress

[JScript] public static var Any : IPAddress;

Description

Provides an IP address indicating that the server should listen for client activity on all network interfaces. This field is read-only.

The **System.Net.Sockets.Socket.Bind(System.Net.EndPoint)** method uses the **System.Net.IPAddress.Any** field to indicate that a **System.Net.Sockets.Socket** instance should listen for client activity on all network interfaces.

GetCredential

[C#] public static readonly IPAddress Broadcast;

[C++] public: static IPAddress* Broadcast;

[VB] Public Shared ReadOnly Broadcast As IPAddress

[JScript] public static var Broadcast : IPAddress;

Description

Provides the IP broadcast address. This field is read-only.

The **System.Net.IPAddress.Broadcast** field is equivalent to 255.255.255.255.

GetCredential

[C#] public static readonly IPAddress Loopback;

[C++] public: static IPAddress* Loopback;

[VB] Public Shared ReadOnly Loopback As IPAddress

[JScript] public static var Loopback : IPAddress;

Description

Provides the IP loopback address. This field is read-only.

The **System.Net.IPAddress.Loopback** field is equivalent to 127.0.0.1 in network byte order.

GetCredential

[C#] public static readonly IPAddress None;

[C++] public: static IPAddress* None;

[VB] Public Shared ReadOnly None As IPAddress

[JScript] public static var None : IPAddress;

Description

Provides an IP address indicating that no network interface should be used.

This field is read-only.

The **System.Net.Sockets.Socket.Bind(System.Net.EndPoint)** method uses the **System.Net.IPAddress.None** field to indicate that a

System.Net.Sockets.Socket instance should not listen for client activity.

IPAddress

Example Syntax:

GetCredential

[C#] public IPAddress(long newAddress);

[C++] public: IPAddress(__int64 newAddress);

[VB] Public Sub New(ByVal newAddress As Long)

[JScript] public function IPAddress(newAddress : long);

1
2 *Description*

3 Initializes a new instance of the **System.Net.IPAddress** class with the
4 specified address.

5 The **System.Net.IPAddress** instance is created with the
6 **System.Net.IPAddress.Address** property set to *newaddress* . The integer value of
7 the IP address.

8 Address

9 GetCredential

10
11 [C#] public int Address {get; set;}

12 [C++] public: __property int get_Address();public: __property void
13 set_Address(int);

14 [VB] Public Property Address As Integer

15 [JScript] public function get Address() : int;public function set Address(int);

16
17 *Description*

18 An Internet Protocol (IP) address.

19 To convert **System.Net.IPAddress.Address** to dotted-quad notation, use
20 the **System.Net.IPAddress.ToString** method.

21 AddressFamily

22 GetCredential

23
24 [C#] public AddressFamily AddressFamily {get;}

25 [C++] public: __property AddressFamily get_AddressFamily();

1 [VB] Public ReadOnly Property AddressFamily As AddressFamily

2 [JScript] public function get AddressFamily() : AddressFamily;

3
4 *Description*

5 Specifies the address family of the IP address.

6 Equals

7
8 [C#] public override bool Equals(object comparand);

9 [C++] public: bool Equals(Object* comparand);

10 [VB] Overrides Public Function Equals(ByVal comparand As Object) As Boolean

11 [JScript] public override function Equals(comparand : Object) : Boolean;

12
13 *Description*

14 Compares two IP addresses.

15 *Return Value:* **true** if the two address are equal; otherwise, **false** .

16 The **System.Net.IPAddress.Equals(System.Object)** method compares the
17 current **System.Net.IPAddress** instance with the *comparand* parameter and
18 returns **true** if the two instance contain the same IP address. An

19 **System.Net.IPAddress** instance to compare to the current instance.

20 GetHashCode

21
22 [C#] public override int GetHashCode();

23 [C++] public: int GetHashCode();

24 [VB] Overrides Public Function GetHashCode() As Integer

25 [JScript] public override function GetHashCode() : int;

Description

Returns a hash value for an IP address.

Return Value: An integer hash value.

The **System.Net.IPAddress.GetHashCode** method returns a hash code of the IP address. This value can be used as a key in hash tables.

HostToNetworkOrder

[C#] public static short HostToNetworkOrder(short host);

[C++] public: static short HostToNetworkOrder(short host);

[VB] Public Shared Function HostToNetworkOrder(ByVal host As Short) As

Short

[JScript] public static function HostToNetworkOrder(host : Int16) : Int16;

Description

Converts a short value from host byte order to network byte order.

Return Value: A short value expressed in network byte order.

Different computers use different conventions for ordering the bytes within multi-byte integer values. Some computers put the most significant byte first (known as big-endian order) and others put the least-significant byte first (known as little-endian order). To enable computers that use different byte ordering, all integer values sent over the network are sent in network byte order. The number to convert expressed in host byte order.

HostToNetworkOrder

[C#] public static int HostToNetworkOrder(int host);

[C++] public: static int HostToNetworkOrder(int host);

[VB] Public Shared Function HostToNetworkOrder(ByVal host As Integer) As Integer

[JScript] public static function HostToNetworkOrder(host : int) : int;

Description

Converts an integer value from host byte order to network byte order.

Return Value: An integer value expressed in network byte order.

Different computers use different conventions for ordering the bytes within multi-byte integer values. Some computers put the most significant byte first (known as big-endian order) and others put the least-significant byte first (known as little-endian order). To enable computers that use different byte ordering, all integer values sent over the network are sent in network byte order. The number to convert expressed in host byte order.

HostToNetworkOrder

[C#] public static long HostToNetworkOrder(long host);

[C++] public: static __int64 HostToNetworkOrder(__int64 host);

[VB] Public Shared Function HostToNetworkOrder(ByVal host As Long) As Long

[JScript] public static function HostToNetworkOrder(host : long) : long; Converts a value from host byte order to network byte order.

Description

Converts a long value from host byte order to network byte order.

Return Value: A long value expressed in network byte order.

Different computers use different conventions for ordering the bytes within multi-byte integer values. Some computers put the most significant byte first (known as big-endian order) and others put the least-significant byte first (known as little-endian order). To enable computers that use different byte ordering, all integer values sent over the network are sent in network byte order. The number to convert expressed in host byte order.

IsLoopback

[C#] public static bool IsLoopback(IPAddress address);

[C++] public: static bool IsLoopback(IPAddress* address);

[VB] Public Shared Function IsLoopback(ByVal address As IPAddress) As Boolean

[JScript] public static function IsLoopback(address : IPAddress) : Boolean;

Description

Indicates whether the specified IP address is the loopback address.

Return Value: **true** if *address* is the loopback address; otherwise **false** .

The **System.Net.IPAddress.IsLoopback(System.Net.IPAddress)** method compares *address* to **System.Net.IPAddress.Loopback** and returns **true** if the two IP address are the same. An IP address.

NetworkToHostOrder

```

1
2 [C#] public static short NetworkToHostOrder(short network);
3 [C++] public: static short NetworkToHostOrder(short network);
4 [VB] Public Shared Function NetworkToHostOrder(ByVal network As Short) As
5 Short
6 [JScript] public static function NetworkToHostOrder(network : Int16) : Int16;
7

```

Description

Converts a short value from network byte order to host byte order.

Return Value: A short value expressed in host byte order.

Different computers use different conventions for ordering the bytes within multi-byte integer values. Some computers put the most significant byte first (known as big-endian order) and others put the least-significant byte first (known as little-endian order). To enable computers that use different byte ordering, all integer values sent over the network are sent in network byte order. The number to convert expressed in network byte order.

NetworkToHostOrder

```

18
19 [C#] public static int NetworkToHostOrder(int network);
20 [C++] public: static int NetworkToHostOrder(int network);
21 [VB] Public Shared Function NetworkToHostOrder(ByVal network As Integer)
22 As Integer
23 [JScript] public static function NetworkToHostOrder(network : int) : int;
24

```

Description

Converts an integer value from network byte order to host byte order.

Return Value: An integer value expressed in host byte order.

Different computers use different conventions for ordering the bytes within multi-byte integer values. Some computers put the most significant byte first (known as big-endian order) and others put the least-significant byte first (known as little-endian order). To enable computers that use different byte ordering, all integer values sent over the network are sent in network byte order. The number to convert expressed in network byte order.

NetworkToHostOrder

[C#] public static long NetworkToHostOrder(long network);

[C++] public: static __int64 NetworkToHostOrder(__int64 network);

[VB] Public Shared Function NetworkToHostOrder(ByVal network As Long) As Long

[JScript] public static function NetworkToHostOrder(network : long) : long;

Converts a number from network byte order to host byte order.

Description

Converts a long value from network byte order to host byte order.

Return Value: A long value expressed in host byte order.

Different computers use different conventions for ordering the bytes within multi-byte integer values. Some computers put the most significant byte first (known as big-endian order) and others put the least-significant byte first (known as little-endian order). To enable computers that use different byte ordering, all

integer values sent over the network are sent in network byte order. The number to convert expressed in network byte order.

Parse

[C#] public static IPAddress Parse(string ipString);

[C++] public: static IPAddress* Parse(String* ipString);

[VB] Public Shared Function Parse(ByVal ipString As String) As IPAddress

[JScript] public static function Parse(ipString : String) : IPAddress;

Description

Converts an IP address string to an **System.Net.IPAddress** instance.

Return Value: An **System.Net.IPAddress** instance.

The static **System.Net.IPAddress.Parse(System.String)** method creates an **System.Net.IPAddress** instance from an IP address expressed in dotted-quad ("192.168.1.2") notation. A string containing an IP address in dotted-quad notation (for example, "192.168.1.2").

ToString

[C#] public override string ToString();

[C++] public: String* ToString();

[VB] Overrides Public Function ToString() As String

[JScript] public override function ToString() : String;

Description

Converts an Internet address to standard dotted-quad format.

Return Value: A string containing the IP address in dotted-quad format (for example, "192.168.1.2").

The **System.Net.IPAddress.ToString** method converts the IP address stored in the **System.Net.IPAddress.Address** property is converted to dotted-quad notation (for example, "192.168.1.2").

EndPoint class (System.Net)

ToString

Description

Represents a network endpoint as an IP address and a port number.

The **System.Net.IPEndPoint** class contains the host and port information needed by an application to connect to a service on a host. By combining the host's IP address and port number of a service, the **System.Net.IPEndPoint** class forms a connection point to a service.

ToString

[C#] public const int MaxPort;

[C++] public: const int MaxPort;

[VB] Public Const MaxPort As Integer

[JScript] public var MaxPort : int;

Description

1 Specifies the maximum value that can be assigned to the
2 **System.Net.IPEndPoint.Port** property. This field is read-only.

3 ToString

4
5 [C#] public const int MinPort;

6 [C++] public: const int MinPort;

7 [VB] Public Const MinPort As Integer

8 [JScript] public var MinPort : int;

9
10 *Description*

11 Specifies the minimum value that can be assigned to the
12 **System.Net.IPEndPoint.Port** property. This field is read-only.

13 IPEndPoint

14 *Example Syntax:*

15 ToString

16
17 [C#] public IPEndPoint(long address, int port);

18 [C++] public: IPEndPoint(__int64 address, int port);

19 [VB] Public Sub New(ByVal address As Long, ByVal port As Integer)

20 [JScript] public function IPEndPoint(address : long, port : int); Initializes a new
21 instance of the **System.Net.IPEndPoint** class.

22
23 *Description*

1 Initializes a new instance of the **System.Net.IPEndPoint** class with the
2 specified address and port number. The IP address of the Internet host. The port
3 number associated with the address, or 0 to specify any available port.

4 **IPEndPoint**

5 *Example Syntax:*

6 **ToString**

7
8 [C#] public IPEndPoint(IPAddress address, int port);

9 [C++] public: IPEndPoint(IPAddress* address, int port);

10 [VB] Public Sub New(ByVal address As IPAddress, ByVal port As Integer)

11 [JScript] public function IPEndPoint(address : IPAddress, port : int);

12
13 *Description*

14 Initializes a new instance of the **System.Net.IPEndPoint** class with the
15 specified address and port number. The IP address of the Internet host. The port
16 number associated with *address* .

17 **Address**

18 **ToString**

19
20 [C#] public IPAddress Address {get; set;}

21 [C++] public: __property IPAddress* get_Address();public: __property void
22 set_Address(IPAddress*);

23 [VB] Public Property Address As IPAddress

24 [JScript] public function get Address() : IPAddress;public function set
25 Address(IPAddress);

ToString

```
[JScript] public function get AddressFamily() : AddressFamily;
```

ToString

```
[JScript] public function get Port() : int; public function set Port(int);
```

Create

1
2 [C#] public override EndPoint Create(SocketAddress socketAddress);

3 [C++] public: EndPoint* Create(SocketAddress* socketAddress);

4 [VB] Overrides Public Function Create(ByVal socketAddress As SocketAddress)

5 As EndPoint

6 [JScript] public override function Create(socketAddress : SocketAddress) :

7 EndPoint;

8
9 *Description*

10 Creates an end point from a socket address.

11 *Return Value:* An **System.Net.EndPoint** instance using the specified socket. The
12 network socket to use for the end point.

13 *Equals*

14
15 [C#] public override bool Equals(object comparand);

16 [C++] public: bool Equals(Object* comparand);

17 [VB] Overrides Public Function Equals(ByVal comparand As Object) As Boolean

18 [JScript] public override function Equals(comparand : Object) : Boolean;

19 *GetHashCode*

20
21 [C#] public override int GetHashCode();

22 [C++] public: int GetHashCode();

23 [VB] Overrides Public Function GetHashCode() As Integer

24 [JScript] public override function GetHashCode() : int;

25 *Serialize*

1
2 [C#] public override SocketAddress Serialize();

3 [C++] public: SocketAddress* Serialize();

4 [VB] Overrides Public Function Serialize() As SocketAddress

5 [JScript] public override function Serialize() : SocketAddress;

6
7 *Description*

8 Serializes end point information into a **System.Net.SocketAddress**
9 instance.

10 *Return Value:* A **System.Net.SocketAddress** instance containing the socket
11 address for the end point.

12 ToString

13
14 [C#] public override string ToString();

15 [C++] public: String* ToString();

16 [VB] Overrides Public Function ToString() As String

17 [JScript] public override function ToString() : String;

18
19 *Description*

20 Returns the IP address and port number for the specified end point.

21 *Return Value:* A string containing the IP address, in dotted-quad notation, and the
22 port number for the specified end point (for example, 192.168.1.2:23).

23 IPHostEntry class (System.Net)

24 ToString

1
2
3 *Description*

4 Provides a container class for Internet host address information.

5 The **System.Net.IPHostEntry** class associates a Domain Name System
6 (DNS) host name with an array of aliases and an array of matching IP addresses.

7 IPHostEntry

8 *Example Syntax:*

9 ToString

10
11 [C#] public IPHostEntry();

12 [C++] public: IPHostEntry();

13 [VB] Public Sub New()

14 [JScript] public function IPHostEntry();

15 AddressList

16 ToString

17
18 [C#] public IPAddress[] AddressList {get; set;}

19 [C++] public: __property IPAddress* get_AddressList();public: __property void
20 set_AddressList(IPAddress*[]);

21 [VB] Public Property AddressList As IPAddress ()

22 [JScript] public function get AddressList() : IPAddress[];public function set
23 AddressList(IPAddress[]);

24
25 *Description*

Gets or sets a list of IP addresses associated with a host.

Aliases

ToString

[C#] public string[] Aliases {get; set;}

[C++] public: __property String* get_Aliases();public: __property void

set_Aliases(String* __gc[]);

[VB] Public Property Aliases As String ()

[JScript] public function get Aliases() : String[];public function set

Aliases(String[]);

Description

Gets or sets a list of aliases associated with a host.

HostName

ToString

[C#] public string HostName {get; set;}

[C++] public: __property String* get_HostName();public: __property void

set_HostName(String*);

[VB] Public Property HostName As String

[JScript] public function get HostName() : String;public function set

HostName(String);

Description

Gets or sets the DNS name of the host.

1 The **System.Net.IPEndPoint.HostName** property contains the primary
2 host name for a server. If the DNS entry for the server defines additional aliases,
3 they will be available in the **System.Net.IPEndPoint.Aliases** property.

4 **IWebProxy** interface (System.Net)

5 **ToString**

6
7
8 *Description*

9 Provides the base interface for implementation of proxy access for the
10 **System.Net.WebRequest** class.

11 The **System.Net.IWebProxy** interface provides the methods and properties
12 required by the **System.Net.WebRequest** class to access proxy servers.

13 **Credentials**

14 **ToString**

15
16 [C#] ICredentials Credentials {get; set;}

17 [C++] ICredentials* get_Credentials();void set_Credentials(ICredentials*);

18 [VB] Property Credentials As ICredentials

19 [JScript] abstract function get Credentials() : ICredentials;public abstract function
20 set Credentials(ICredentials);

21
22 *Description*

23 The credentials to submit to the proxy server for authentication.
24
25

1 The **System.Net.IWebProxy.Credentials** property is an
2 **System.Net.ICredentials** instance containing the authorization credentials to send
3 to the proxy server in response to an HTTP 407 (proxy authorization) status code.

4 GetProxy

5
6 [C#] Uri GetProxy(Uri destination);
7 [C++] Uri* GetProxy(Uri* destination);
8 [VB] Function GetProxy(ByVal destination As Uri) As Uri
9 [JScript] function GetProxy(destination : Uri) : Uri;

11 *Description*

12 Returns the URI of a proxy.

13 *Return Value:* A **System.Uri** containing the URI of the proxy used to contact
14 *destination* .

15 The **System.Net.IWebProxy.GetProxy(System.Uri)** method returns the
16 URI of the proxy server that handles requests to the Internet resource specified in
17 the *destination* parameter. A **System.Uri** specifying the requested Internet
18 resource.

19 IsBypassed

20
21 [C#] bool IsBypassed(Uri host);
22 [C++] bool IsBypassed(Uri* host);
23 [VB] Function IsBypassed(ByVal host As Uri) As Boolean
24 [JScript] function IsBypassed(host : Uri) : Boolean;

1
2 *Description*

3 Indicates that the proxy should not be used for the specified host.

4 *Return Value:* **true** if the proxy server should not be used for *host* ; otherwise,
5 **false** .

6 The **System.Net.IWebProxy.IsBypassed(System.Uri)** method indicates
7 whether to use the proxy server to access the host specified in the *host* parameter.
8 If **System.Net.IWebProxy.IsBypassed(System.Uri)** is **true** , the proxy is not
9 used to contact the host and the request is passed directly to the server. The
10 **System.Uri** of the host to check for proxy use.

11 IWebRequestCreate interface (System.Net)

12 IsBypassed

13
14
15 *Description*

16 Provides the base interface for creating **System.Net.WebRequest**
17 instances.

18 The **System.Net.IWebRequestCreate** interface defines the method that
19 **System.Net.WebRequest** descendants must use to register with the
20 **System.Net.WebRequest.Create(System.Uri,System.Boolean)** method.

21 Create

22
23 [C#] WebRequest Create(Uri uri);

24 [C++] WebRequest* Create(Uri* uri);

25 [VB] Function Create(ByVal uri As Uri) As WebRequest

1 [JScript] function Create(uri : Uri) : WebRequest;

3 *Description*

4 Creates a **System.Net.WebRequest** instance.

5 *Return Value:* A **System.Net.WebRequest** instance.

6 The **System.Net.IWebRequestCreate.Create(System.Uri)** method must
7 return an initialized instance of the **System.Net.WebRequest** descendant capable
8 of performing a standard request/response transaction for the protocol without
9 needing any protocol-specific fields modified. The uniform resource identifier
10 (URI) of the Web resource.

11 NetworkAccess enumeration (System.Net)

12 Create

15 *Description*

16 Specifies network access permissions.

17 The **System.Net.NetworkAccess** enumeration is used with the
18 **System.Net.WebPermission** and **System.Net.SocketPermission** classes.

19 Create

21 [C#] public const NetworkAccess Accept;

22 [C++] public: const NetworkAccess Accept;

23 [VB] Public Const Accept As NetworkAccess

24 [JScript] public var Accept : NetworkAccess;

Description

Indicates that the application is allowed to accept connections from the Internet on a local resource.

Create

[C#] public const NetworkAccess Connect;

[C++] public: const NetworkAccess Connect;

[VB] Public Const Connect As NetworkAccess

[JScript] public var Connect : NetworkAccess;

Description

Indicates that the application is allowed to connect to specific Internet resources.

NetworkCredential class (System.Net)

ToString

Description

Provides credentials for password-based authentication schemes such as basic, digest, NTLM, and Kerberos authentication.

The **System.Net.NetworkCredential** class is a base class that supplies credentials in password-based authentication schemes such as basic, digest, NTLM, and Kerberos. Classes that implement the **System.Net.ICredentials**

interface, such as the **System.Net.CredentialCache** class, return

System.Net.NetworkCredential instances.

NetworkCredential

Example Syntax:

ToString

[C#] public NetworkCredential();

[C++] public: NetworkCredential();

[VB] Public Sub New()

[JScript] public function NetworkCredential();

NetworkCredential

Example Syntax:

ToString

[C#] public NetworkCredential(string userName, string password);

[C++] public: NetworkCredential(String* userName, String* password);

[VB] Public Sub New(ByVal userName As String, ByVal password As String)

[JScript] public function NetworkCredential(userName : String, password :

String); Initializes a new instance of the **System.Net.NetworkCredential** class.

Description

Initializes a new instance of the **System.Net.NetworkCredential** class with the specified user name and password.

The constructor initializes a **System.Net.NetworkCredential** instance is initialized with the **System.Net.NetworkCredential.UserName** property set to

1 *userName* and the **System.Net.NetworkCredential.Password** property set to
2 *password* . The user name associated with the credentials. The password for the
3 user name associated with the credentials.

4 **NetworkCredential**

5 *Example Syntax:*

6 **ToString**

7
8 [C#] public NetworkCredential(string userName, string password, string domain);

9 [C++] public: NetworkCredential(String* userName, String* password, String*
10 domain);

11 [VB] Public Sub New(ByVal userName As String, ByVal password As String,
12 ByVal domain As String)

13 [JScript] public function NetworkCredential(userName : String, password : String,
14 domain : String);

15
16 *Description*

17 Initializes a new instance of the **System.Net.NetworkCredential** class with
18 the specified user name, password, and domain.

19 The constructor initializes a **System.Net.NetworkCredential** instance with
20 the **System.Net.NetworkCredential.UserName** property set to *userName* , the
21 **System.Net.NetworkCredential.Password** property set to *password* , and the
22 **System.Net.NetworkCredential.Domain** property set to *domain* . The user name
23 associated with the credentials. The password for the user name associated with
24 the credentials. The domain associated with these credentials.

25 **Domain**

ToString

[C#] public string Domain {get; set;}

[C++] public: __property String* get_Domain();public: __property void
set_Domain(String*);

[VB] Public Property Domain As String

[JScript] public function get Domain() : String;public function set Domain(String);

Description

Gets or sets the domain or machine name that verifies the credentials.

The **System.Net.NetworkCredential.Domain** property specifies the domain or realm to which the user name belongs. Typically, this is the host machine name where the application runs or user domain for the currently logged in user.

Password

ToString

[C#] public string Password {get; set;}

[C++] public: __property String* get_Password();public: __property void
set_Password(String*);

[VB] Public Property Password As String

[JScript] public function get Password() : String;public function set
Password(String);

Description

Gets or sets the password for the user name associated with the credentials.

UserName

ToString

[C#] public string UserName {get; set;}

[C++] public: __property String* get_UserName();public: __property void

set_UserName(String*);

[VB] Public Property UserName As String

[JScript] public function get UserName() : String;public function set

UserName(String);

Description

Gets or sets the user name associated with the credentials.

GetCredential

[C#] public NetworkCredential GetCredential(Uri uri, string authType);

[C++] public: __sealed NetworkCredential* GetCredential(Uri* uri, String*

authType);

[VB] NotOverridable Public Function GetCredential(ByVal uri As Uri, ByVal

authType As String) As NetworkCredential

[JScript] public function GetCredential(uri : Uri, authType : String) :

NetworkCredential;

Description

1 Returns an instance of the **System.Net.NetworkCredential** class for the
2 specified URI and authentication type.

3 *Return Value:* A **System.Net.NetworkCredential** instance. The URI that the
4 client is providing authentication for. The type of authentication requested as
5 defined in the **System.Net.IAuthenticationModule.AuthenticationType**
6 property.

7 ProtocolViolationException class (System.Net)

8 ToString

9
10
11 *Description*

12 The exception that is thrown when an error is made while using a network
13 protocol.

14 A **System.Net.ProtocolViolationException** is thrown by descendants of
15 **System.Net.WebRequest** and **System.Net.WebResponse** to indicate an error
16 using the underlying protocol. For example, the **System.Net.HttpWebRequest**
17 and **System.Net.HttpWebResponse** classes throw a
18 **System.Net.ProtocolViolationException** to indicate an error using HTTP.

19 ProtocolViolationException

20 *Example Syntax:*

21 ToString

22
23 [C#] public ProtocolViolationException();

24 [C++] public: ProtocolViolationException();

25 [VB] Public Sub New()

1 [JScript] public function ProtocolViolationException(); Initializes a new instance
2 of the **System.Net.ProtocolViolationException** class.

3 4 *Description*

5 Initializes a new instance of the **System.Net.ProtocolViolationException**
6 class.

7 The default constructor initializes a new instance of the
8 **System.Net.ProtocolViolationException** class with all properties set to **null** .

9 ProtocolViolationException

10 *Example Syntax:*

11 ToString

12
13 [C#] public ProtocolViolationException(string message);

14 [C++] public: ProtocolViolationException(String* message);

15 [VB] Public Sub New(ByVal message As String)

16 [JScript] public function ProtocolViolationException(message : String);

17 18 *Description*

19 Initializes a new instance of the **System.Net.ProtocolViolationException**
20 class with the specified message.

21 The **System.Net.ProtocolViolationException.#ctor** constructor initializes
22 a new instance of the **System.Net.ProtocolViolationException** class with the
23 **System.Exception.Message** property set to the value of the *message* parameter.

24 The error message string.

25 ProtocolViolationException

Example Syntax:

ToString

[C#] protected ProtocolViolationException(SerializationInfo serializationInfo,
StreamingContext streamingContext);

[C++] protected: ProtocolViolationException(SerializationInfo* serializationInfo,
StreamingContext streamingContext);

[VB] Protected Sub New(ByVal serializationInfo As SerializationInfo, ByVal
streamingContext As StreamingContext)

[JScript] protected function ProtocolViolationException(serializationInfo :
SerializationInfo, streamingContext : StreamingContext);

HelpLink

HResult

InnerException

Message

Source

StackTrace

TargetSite

ISerializable.GetObjectData

[C#] void ISerializable.GetObjectData(SerializationInfo serializationInfo,
StreamingContext streamingContext);

[C++] void ISerializable::GetObjectData(SerializationInfo* serializationInfo,
StreamingContext streamingContext);

[VB] Sub GetObjectData(ByVal serializationInfo As SerializationInfo, ByVal

streamingContext As StreamingContext) Implements ISerializable.GetObjectData
[JScript] function ISerializable.GetObjectData(serializationInfo : SerializationInfo,
streamingContext : StreamingContext);

ServicePoint class (System.Net)

ToString

Description

Provides connection management for HTTP connections.

The **System.Net.ServicePoint** class handles connections to an Internet resource based on the host information passed in the resource's URI. The initial connection to the resource determines the information the **System.Net.ServicePoint** maintains, which is then shared by all subsequent requests to that resource.

Address

ToString

[C#] public Uri Address {get;}

[C++] public: __property Uri* get_Address();

[VB] Public ReadOnly Property Address As Uri

[JScript] public function get Address() : Uri;

Description

Gets the URI of the **System.Net.ServicePoint**.

Certificate

ToString

```
[C#] public X509Certificate Certificate {get;}
[C++] public: __property X509Certificate* get_Certificate();
[VB] Public ReadOnly Property Certificate As X509Certificate
[JScript] public function get Certificate() : X509Certificate;
```

Description

Gets the certificate received for this **System.Net.ServicePoint** .

Although a **System.Net.ServicePoint** can make multiple connections to an Internet resource, it can maintain only one certificate.

ClientCertificate

ToString

```
[C#] public X509Certificate ClientCertificate {get;}
[C++] public: __property X509Certificate* get_ClientCertificate();
[VB] Public ReadOnly Property ClientCertificate As X509Certificate
[JScript] public function get ClientCertificate() : X509Certificate; Gets the Client
Certificate sent by us to the Server.
```

ConnectionLimit

ToString

```
[C#] public int ConnectionLimit {get; set;}
[C++] public: __property int get_ConnectionLimit();public: __property void
set_ConnectionLimit(int);
```


1 [VB] Public Property ConnectionLimit As Integer

2 [JScript] public function get ConnectionLimit() : int; public function set

3 ConnectionLimit(int);

4
5 *Description*

6 Gets or sets the maximum number of connections allowed on this

7 **System.Net.ServicePoint** .

8 The **System.Net.ServicePoint.ConnectionLimit** property sets the
9 maximum number of connections that the **System.Net.ServicePoint** can make to
10 an Internet resource. The value of the **System.Net.ServicePoint.ConnectionLimit**
11 property is set to the value of the

12 **System.Net.ServicePointManager.DefaultConnectionLimit** property when the
13 **System.Net.ServicePoint** is created; subsequent changes to
14 **System.Net.ServicePointManager.DefaultConnectionLimit** have no effect on
15 existing **System.Net.ServicePoint** instances.

16 ConnectionName

17 ToString

18
19 [C#] public string ConnectionName {get;}

20 [C++] public: __property String* get_ConnectionName();

21 [VB] Public ReadOnly Property ConnectionName As String

22 [JScript] public function get ConnectionName() : String;

23
24 *Description*

1 Gets the connection group name established by the
2 **System.Net.WebRequest** that created the connection.

3 The **System.Net.ServicePoint.ConnectionName** property contains the
4 connection group assigned to the
5 **System.Net.WebRequest.ConnectionGroupName** property of the
6 **System.Net.WebRequest** that initiated the connection provided by this
7 **System.Net.ServicePoint** . If the **System.Net.ServicePoint.ConnectionName**
8 property is set, only **System.Net.WebRequest** instances with the same
9 **System.Net.WebRequest.ConnectionGroupName** can use this
10 **System.Net.ServicePoint** .

11 CurrentConnections

12 ToString

13
14 [C#] public int CurrentConnections {get;}

15 [C++] public: __property int get_CurrentConnections();

16 [VB] Public ReadOnly Property CurrentConnections As Integer

17 [JScript] public function get CurrentConnections() : int;

18
19 *Description*

20 Gets the number of connections associated with this
21 **System.Net.ServicePoint** .

22 The **System.Net.ServicePoint.CurrentConnections** property contains the
23 number of active Internet connections associated with this
24 **System.Net.ServicePoint** . The value of
25

1 **System.Net.ServicePoint.CurrentConnections** cannot exceed that of

2 **System.Net.ServicePoint.ConnectionLimit** .

3 IdleSince

4 ToString

5
6 [C#] public DateTime IdleSince {get;}

7 [C++] public: __property DateTime get_IdleSince();

8 [VB] Public ReadOnly Property IdleSince As DateTime

9 [JScript] public function get IdleSince() : DateTime;

10
11 *Description*

12 Gets the date and time that the **System.Net.ServicePoint** was last accessed.

13 The **System.Net.ServicePoint.IdleSince** property records the last date and
14 time at which a service point was accessed. When the difference between the
15 current time and **System.Net.ServicePoint.IdleSince** exceeds the value of
16 **System.Net.ServicePoint.MaxIdleTime** , the **System.Net.ServicePoint** is
17 available for recycling to another connection.

18 MaxIdleTime

19 ToString

20
21 [C#] public int MaxIdleTime {get; set;}

22 [C++] public: __property int get_MaxIdleTime();public: __property void
23 set_MaxIdleTime(int);

24 [VB] Public Property MaxIdleTime As Integer

25 [JScript] public function get MaxIdleTime() : int;public function set

1 MaxIdleTime(int);

3 *Description*

4 Gets or sets the maximum idle time for the **System.Net.ServicePoint** .

5 The **System.Net.ServicePoint.MaxIdleTime** property contains the length
6 of time, in milliseconds, that the **System.Net.ServicePoint** is allowed to maintain
7 an idle connection to an Internet resource before it is recycled for use in another
8 connection.

9 ProtocolVersion

10 ToString

12 [C#] public virtual Version ProtocolVersion {get;}

13 [C++] public: __property virtual Version* get_ProtocolVersion();

14 [VB] Overridable Public ReadOnly Property ProtocolVersion As Version

15 [JScript] public function get ProtocolVersion() : Version;

17 *Description*

18 Gets the version of the HTTP protocol that the **System.Net.ServicePoint**
19 uses.

20 SupportsPipelining

21 ToString

23 [C#] public bool SupportsPipelining {get;}

24 [C++] public: __property bool get_SupportsPipelining();

25 [VB] Public ReadOnly Property SupportsPipelining As Boolean

1 [JScript] public function get SupportsPipelining() : Boolean;

3 *Description*

4 Indicates whether the **System.Net.ServicePoint** supports pipelined
5 connections.

6 GetHashCode

8 [C#] public override int GetHashCode();

9 [C++] public: int GetHashCode();

10 [VB] Overrides Public Function GetHashCode() As Integer

11 [JScript] public override function GetHashCode() : int;

13 *Description*

14 Gets the hash code for the **System.Net.ServicePoint** .

15 *Return Value:* The hash code for the **System.Net.ServicePoint** .

16 The hash code for **System.Net.ServicePoint** A and B is the same if
17 A.Equals(B) is **true** .

18 ServicePointManager class (System.Net)

19 ToString

22 *Description*

23 Manages the collection of **System.Net.ServicePoint** instances.

24 **System.Net.ServicePointManager** is a static class used to create,
25 maintain, and delete instances of the **System.Net.ServicePoint** class.

ToString

[C#] public const int DefaultNonPersistentConnectionLimit;

[C++] public: const int DefaultNonPersistentConnectionLimit;

[VB] Public Const DefaultNonPersistentConnectionLimit As Integer

[JScript] public var DefaultNonPersistentConnectionLimit : int;

Description

The default number of nonpersistent connections allowed on a **System.Net.ServicePoint** connected to an HTTP/1.1 server.

ToString

[C#] public const int DefaultPersistentConnectionLimit;

[C++] public: const int DefaultPersistentConnectionLimit;

[VB] Public Const DefaultPersistentConnectionLimit As Integer

[JScript] public var DefaultPersistentConnectionLimit : int;

Description

The default number of persistent connections allowed on a **System.Net.ServicePoint** connected to an HTTP/1.0 server.

CertificatePolicy

ToString

[C#] public static ICertificatePolicy CertificatePolicy {get; set;}

[C++] public: __property static ICertificatePolicy* get_CertificatePolicy();public:

1 __property static void set_CertificatePolicy(ICertificatePolicy*);

2 [VB] Public Shared Property CertificatePolicy As ICertificatePolicy

3 [JScript] public static function get CertificatePolicy() : ICertificatePolicy;public

4 static function set CertificatePolicy(ICertificatePolicy);

5
6 *Description*

7 Gets or sets policy for server certificates.

8 When the **System.Net.ServicePointManager.CertificatePolicy** property is
9 set to an **System.Net.ICertificatePolicy** interface instance, the
10 **System.Net.ServicePointManager** uses the certificate policy defined in that
11 instance instead of the default certificate policy.

12 DefaultConnectionLimit

13 ToString

14
15 [C#] public static int DefaultConnectionLimit {get; set;}

16 [C++] public: __property static int get_DefaultConnectionLimit();public:

17 __property static void set_DefaultConnectionLimit(int);

18 [VB] Public Shared Property DefaultConnectionLimit As Integer

19 [JScript] public static function get DefaultConnectionLimit() : int;public static
20 function set DefaultConnectionLimit(int);

21
22 *Description*

23 The maximum number of concurrent connections allowed by a
24 **System.Net.ServicePoint** instance.

The **System.Net.ServicePointManager.DefaultConnectionLimit**

property sets the default maximum number of concurrent connections that the **System.Net.ServicePointManager** assigns to the **System.Net.ServicePoint.ConnectionLimit** property when creating **System.Net.ServicePoint** instances.

MaxServicePointIdleTime

ToString

```
[C#] public static int MaxServicePointIdleTime {get; set;}
```

```
[C++] public: __property static int get_MaxServicePointIdleTime();public:
```

```
__property static void set_MaxServicePointIdleTime(int);
```

```
[VB] Public Shared Property MaxServicePointIdleTime As Integer
```

```
[JScript] public static function get MaxServicePointIdleTime() : int;public static  
function set MaxServicePointIdleTime(int);
```

Description

Gets or sets the maximum idle time of a **System.Net.ServicePoint** instance.

The **System.Net.ServicePointManager.MaxServicePointIdleTime** property sets the maximum idle time that the **System.Net.ServicePointManager** assigns to the **System.Net.ServicePoint.MaxIdleTime** property when creating **System.Net.ServicePoint** instances. Changes to this value will affect only **System.Net.ServicePoint** instances that are initialized after the value is changed.

MaxServicePoints

ToString

1
2 [C#] public static int MaxServicePoints {get; set;}

3 [C++] public: __property static int get _MaxServicePoints();public: __property

4 static void set _MaxServicePoints(int);

5 [VB] Public Shared Property MaxServicePoints As Integer

6 [JScript] public static function get MaxServicePoints() : int;public static function

7 set MaxServicePoints(int);

8
9 *Description*

10 Gets or sets the maximum number of **System.Net.ServicePoint** instances
11 to maintain at any time.

12 When you reduce the
13 **System.Net.ServicePointManager.MaxServicePoints** property below the
14 number of **System.Net.ServicePoint** instances currently in existence, the
15 **System.Net.ServicePointManager** deletes the **System.Net.ServicePoint**
16 instances with the longest idle times. If the number of **System.Net.ServicePoint**
17 instances with active connections is greater than the value of
18 **System.Net.ServicePointManager.MaxServicePoints** , the
19 **System.Net.ServicePointManager** will delete the **System.Net.ServicePoint**
20 instances as they become idle.

21 **FindServicePoint**

22
23 [C#] public static ServicePoint FindServicePoint(Uri address);

24 [C++] public: static ServicePoint* FindServicePoint(Uri* address);

25 [VB] Public Shared Function FindServicePoint(ByVal address As Uri) As

ServicePoint

[JScript] public static function FindServicePoint(address : Uri) : ServicePoint;

Finds an existing **System.Net.ServicePoint** or creates a new

System.Net.ServicePoint to manage communication for this request.

Description

Finds an existing **System.Net.ServicePoint** or creates a new

System.Net.ServicePoint to manage communications with the specified

System.Uri .

Return Value: The **System.Net.ServicePoint** that manages communications for the request.

The **System.Net.ServicePointManager.FindServicePoint(System.Uri)** method returns the **System.Net.ServicePoint** instance associated with the specified Internet host name. If no **System.Net.ServicePoint** exists for that host, the **System.Net.ServicePointManager** creates one. The **System.Uri** of the Internet resource to contact.

FindServicePoint

[C#] public static ServicePoint FindServicePoint(string uriString, IWebProxy proxy);

[C++] public: static ServicePoint* FindServicePoint(String* uriString, IWebProxy* proxy);

[VB] Public Shared Function FindServicePoint(ByVal uriString As String, ByVal proxy As IWebProxy) As ServicePoint

[JScript] public static function FindServicePoint(uriString : String, proxy :

1 IWebProxy) : ServicePoint; Finds an existing **System.Net.ServicePoint** or creates
2 a new **System.Net.ServicePoint** to manage communication for this request.

3 4 *Description*

5 Finds an existing **System.Net.ServicePoint** or creates a new
6 **System.Net.ServicePoint** to manage communications with the specified URI.

7 *Return Value:* The **System.Net.ServicePoint** that manages communications for
8 the request.

9 The **System.Net.ServicePointManager.FindServicePoint(System.Uri)**
10 method returns the **System.Net.ServicePoint** instance associated with the
11 specified Internet host name. If no **System.Net.ServicePoint** exists for that host,
12 the **System.Net.ServicePointManager** creates one. The URI of the Internet
13 resource to be contacted. Proxy data for this request.

14 **FindServicePoint**

15
16 [C#] public static ServicePoint FindServicePoint(Uri address, IWebProxy proxy);

17 [C++] public: static ServicePoint* FindServicePoint(Uri* address, IWebProxy*
18 proxy);

19 [VB] Public Shared Function FindServicePoint(ByVal address As Uri, ByVal
20 proxy As IWebProxy) As ServicePoint

21 [JScript] public static function FindServicePoint(address : Uri, proxy :
22 IWebProxy) : ServicePoint;

23 24 *Description*

1 Finds an existing **System.Net.ServicePoint** or creates a new
2 **System.Net.ServicePoint** to manage communications with the specified
3 **System.Uri** instance.

4 *Return Value:* The **System.Net.ServicePoint** that manages communications for
5 the request.

6 The **System.Net.ServicePointManager.FindServicePoint(System.Uri)**
7 method returns the **System.Net.ServicePoint** instance associated with the
8 specified Internet host name. If no **System.Net.ServicePoint** exists for that host,
9 the **System.Net.ServicePointManager** creates one. A **System.Uri** instance
10 containing the address of the Internet resource to contact. Proxy data for this
11 request.

12 SocketAddress class (System.Net)

13 ToString

14
15
16 *Description*

17 Identifies a socket address.

18 SocketAddress

19 *Example Syntax:*

20 ToString

21
22 [C#] public SocketAddress(AddressFamily family);

23 [C++] public: SocketAddress(AddressFamily family);

24 [VB] Public Sub New(ByVal family As AddressFamily)

25 [JScript] public function SocketAddress(family : AddressFamily); Initializes a

new instance of the **System.Net.SocketAddress** class.

Description

Initializes a new instance of the **System.Net.SocketAddress** class for the given address family.

SocketAddress

Example Syntax:

ToString

[C#] public SocketAddress(AddressFamily family, int size);

[C++] public: SocketAddress(AddressFamily family, int size);

[VB] Public Sub New(ByVal family As AddressFamily, ByVal size As Integer)

[JScript] public function SocketAddress(family : AddressFamily, size : int);

Description

Family

ToString

[C#] public AddressFamily Family {get;}

[C++] public: __property AddressFamily get_Family();

[VB] Public ReadOnly Property Family As AddressFamily

[JScript] public function get Family() : AddressFamily;

Description

Item

ToString

[C#] public byte this[int offset] {get; set;}

[C++] public: __property unsigned char get_Item(int offset);public: __property

void set_Item(int offset, unsigned char);

[VB] Public Default Property Item(ByVal offset As Integer) As Byte

[JScript] returnValue =

SocketAddressObject.Item(offset);SocketAddressObject.Item(offset) =

returnValue;

Description

Size

ToString

[C#] public int Size {get;}

[C++] public: __property int get_Size();

[VB] Public ReadOnly Property Size As Integer

[JScript] public function get Size() : int;

Description

Equals

1
2 [C#] public override bool Equals(object comparand);

3 [C++] public: bool Equals(Object* comparand);

4 [VB] Overrides Public Function Equals(ByVal comparand As Object) As Boolean

5 [JScript] public override function Equals(comparand : Object) : Boolean;

6 GetHashCode

7
8 [C#] public override int GetHashCode();

9 [C++] public: int GetHashCode();

10 [VB] Overrides Public Function GetHashCode() As Integer

11 [JScript] public override function GetHashCode() : int;

12 ToString

13
14 [C#] public override string ToString();

15 [C++] public: String* ToString();

16 [VB] Overrides Public Function ToString() As String

17 [JScript] public override function ToString() : String;

18 SocketPermission class (System.Net)

19 ToString

20
21
22 *Description*

23 Controls rights to make or accept connections on a transport address.

24 ToString

[C#] public const int AllPorts;

[C++] public: const int AllPorts;

[VB] Public Const AllPorts As Integer

[JScript] public var AllPorts : int;

Description

Defines a constant representing all ports.

SocketPermission

Example Syntax:

ToString

[C#] public SocketPermission(PermissionState state);

[C++] public: SocketPermission(PermissionState state);

[VB] Public Sub New(ByVal state As PermissionState)

[JScript] public function SocketPermission(state : PermissionState); Initializes a new instance of the **System.Net.SocketPermission** class.

Description

Initializes a new instance of the **System.Net.SocketPermission** class that passes all demands or fails all demands.

If the **System.Net.SocketPermission** instance was created with the **Unrestricted** value from **System.Security.Permissions.PermissionState** then the **System.Net.SocketPermission** instance will pass all demands. Any other value

for *state* will result in a **System.Net.SocketPermission** instance that will fail all demands. One of the **System.Security.Permissions.PermissionState** values.

SocketPermission

Example Syntax:

ToString

```
[C#] public SocketPermission(NetworkAccess access, TransportType transport,
string hostName, int portNumber);
```

```
[C++] public: SocketPermission(NetworkAccess access, TransportType transport,
String* hostName, int portNumber);
```

```
[VB] Public Sub New(ByVal access As NetworkAccess, ByVal transport As
TransportType, ByVal hostName As String, ByVal portNumber As Integer)
```

```
[JScript] public function SocketPermission(access : NetworkAccess, transport :
TransportType, hostName : String, portNumber : int);
```

Description

Initializes a new instance of the **System.Net.SocketPermission** class for the given transport address with the specified permission. One of the **System.Net.NetworkAccess** values. One of the **System.Net.TransportType** values. The host name for the transport address. The port number for the transport address.

AcceptList

ToString

```
[C#] public IEnumerable AcceptList {get;}
```

1 [C++] public: __property IEnumeration* get_AcceptList();

2 [VB] Public ReadOnly Property AcceptList As IEnumeration

3 [JScript] public function get AcceptList() : IEnumeration;

4
5 *Description*

6 Gets a list of **System.Net.EndpointPermission** instances identifying the
7 endpoints that can be accepted under this permission instance.

8 ConnectList

9 ToString

10
11 [C#] public IEnumeration ConnectList {get;}

12 [C++] public: __property IEnumeration* get_ConnectList();

13 [VB] Public ReadOnly Property ConnectList As IEnumeration

14 [JScript] public function get ConnectList() : IEnumeration;

15
16 *Description*

17 Gets a list of **System.Net.EndpointPermission** instances identifying the
18 endpoints that can be connected to under this permission instance.

19 AddPermission

20
21 [C#] public void AddPermission(NetworkAccess access, TransportType transport,
22 string hostName, int portNumber);

23 [C++] public: void AddPermission(NetworkAccess access, TransportType
24 transport, String* hostName, int portNumber);

25 [VB] Public Sub AddPermission(ByVal access As NetworkAccess, ByVal

1 transport As TransportType, ByVal hostName As String, ByVal portNumber As
2 Integer)

3 [JScript] public function AddPermission(access : NetworkAccess, transport :
4 TransportType, hostName : String, portNumber : int);

6 *Description*

7 Adds a permission to the set of permissions for a transport address.

8 Permissions are checked with a logical OR operation. One of the
9 **System.Net.NetworkAccess** values. One of the **System.Net.TransportType**
10 values. The host name for the transport address. The port number for the transport
11 address.

12 *Copy*

13
14 [C#] public override IPPermission Copy();

15 [C++] public: IPPermission* Copy();

16 [VB] Overrides Public Function Copy() As IPPermission

17 [JScript] public override function Copy() : IPPermission;

19 *Description*

20 Creates a copy of a **System.Net.SocketPermission** instance.

21 *Return Value:* A new instance of the **System.Net.SocketPermission** class that is a
22 copy of the current instance.

23 *FromXml*

24
25 [C#] public override void FromXml(SecurityElement securityElement);

1 [C++] public: void FromXml(SecurityElement* securityElement);

2 [VB] Overrides Public Sub FromXml(ByVal securityElement As
3 SecurityElement)

4 [JScript] public override function FromXml(securityElement : SecurityElement);

5
6 *Description*

7 Reconstructs a **System.Net.SocketPermission** instance for an XML
8 encoding.

9 The
10 **System.Net.SocketPermission.FromXml(System.Security.SecurityElement)**
11 method reconstructs a **System.Net.SocketPermission** instance from an XML
12 encoding defined by the **System.Security.SecurityElement** class. The XML
13 encoding used to reconstruct the **System.Net.SocketPermission** instance.

14 *Intersect*

15
16 [C#] public override IPPermission Intersect(IPPermission target);

17 [C++] public: IPPermission* Intersect(IPPermission* target);

18 [VB] Overrides Public Function Intersect(ByVal target As IPPermission) As
19 IPPermission

20 [JScript] public override function Intersect(target : IPPermission) : IPPermission;

21
22 *Description*

23 Returns the logical intersection between two
24 **System.Net.SocketPermission** instances.

25 *Return Value:* The **System.Net.SocketPermission** instance that represents the

intersection of two **System.Net.SocketPermission** instances. The **System.Net.SocketPermission** instance to combine with the current instance.

IsSubsetOf

[C#] public override bool IsSubsetOf(IPermission target);

[C++] public: bool IsSubsetOf(IPermission* target);

[VB] Overrides Public Function IsSubsetOf(ByVal target As IPermission) As

Boolean

[JScript] public override function IsSubsetOf(target : IPermission) : Boolean;

Description

Compares two **System.Net.SocketPermission** instances.

Return Value: **false** if *target* is **null** ; otherwise, an exception is thrown.

The **System.Net.SocketPermission** class does not support the **System.Net.SocketPermission.IsSubsetOf(System.Security.IPermission)** method. The second **System.Net.SocketPermission** instance to compare.

IsUnrestricted

[C#] public bool IsUnrestricted();

[C++] public: __sealed bool IsUnrestricted();

[VB] NotOverridable Public Function IsUnrestricted() As Boolean

[JScript] public function IsUnrestricted() : Boolean;

Description

Checks the overall permission state of the object.

Return Value: **true** if the **System.Net.SocketPermission** instance was created with the **Unrestricted** value from **System.Security.Permissions.PermissionState**; otherwise, **false**.

ToXml

[C#] public override SecurityElement ToXml();

[C++] public: SecurityElement* ToXml();

[VB] Overrides Public Function ToXml() As SecurityElement

[JScript] public override function ToXml() : SecurityElement;

Description

Creates an XML encoding of a **System.Net.SocketPermission** instance and its current state.

Return Value: A **System.Security.SecurityElement** instance containing an XML-encoded representation of the **System.Net.SocketPermission** instance, including state information.

The **System.Net.SocketPermission.ToXml** method creates a **System.Security.SecurityElement** instance to encode a representation of the **System.Net.SocketPermission** instance, including state information, in XML.

Union

[C#] public override IPPermission Union(IPPermission target);

[C++] public: IPPermission* Union(IPPermission* target);

[VB] Overrides Public Function Union(ByVal target As IPPermission) As

1 **IPermission**

2 [JScript] public override function Union(target : IPermission) : IPermission;

4 *Description*

5 Returns the logical union between two **System.Net.SocketPermission**
6 instances.

7 *Return Value:* The **System.Net.SocketPermission** instance that represents the
8 union of two **System.Net.SocketPermission** instances. The

9 **System.Net.SocketPermission** instance to combine with the current instance.

10 SocketPermissionAttribute class (System.Net)

11 Union

14 *Description*

15 Enables security actions for **System.Net.SocketPermission** to be applied to
16 code using declarative security. This class cannot be inherited.

17 SocketPermissionAttribute

18 *Example Syntax:*

19 Union

21 [C#] public SocketPermissionAttribute(SecurityAction action);

22 [C++] public: SocketPermissionAttribute(SecurityAction action);

23 [VB] Public Sub New(ByVal action As SecurityAction)

24 [JScript] public function SocketPermissionAttribute(action : SecurityAction);

1
2 *Description*

3 Initializes a new instance of the **System.Net.SocketPermissionAttribute**
4 class with the specified **System.Security.Permissions.SecurityAction** value. One
5 of the **System.Security.Permissions.SecurityAction** values.

6 Access

7 Union

8
9 [C#] public string Access {get; set;}

10 [C++] public: __property String* get_Access();public: __property void
11 set_Access(String*);

12 [VB] Public Property Access As String

13 [JScript] public function get Access() : String;public function set Access(String);

14
15 *Description*

16 Gets or sets the network access method allowed by this permission
17 instance.

18 Action

19 Host

20 Union

21
22
23 *Description*

24 The DNS host name or IP address associated with this permission instance.

25 Port

Union

[C#] public string Port {get; set;}

[C++] public: __property String* get_Port();public: __property void

set_Port(String*);

[VB] Public Property Port As String

[JScript] public function get Port() : String;public function set Port(String);

Description

Gets or sets the transport type associated with this permission instance.

Transport

Union

[C#] public string Transport {get; set;}

[C++] public: __property String* get_Transport();public: __property void

set_Transport(String*);

[VB] Public Property Transport As String

[JScript] public function get Transport() : String;public function set

Transport(String);

Description

Gets or sets the transport type associated with this permission instance.

TypeId

Unrestricted

CreatePermission

1 [C#] public override IPPermission CreatePermission();

2 [C++] public: IPPermission* CreatePermission();

3 [VB] Overrides Public Function CreatePermission() As IPPermission

4 [JScript] public override function CreatePermission() : IPPermission;

5
6
7 *Description*

8 Creates and returns a new instance of the **System.Net.SocketPermission**
9 class.

10 *Return Value:* An instance of the **System.Net.SocketPermission** class
11 corresponding to the security declaration.

12 The **System.Net.SocketPermissionAttribute.CreatePermission** method is
13 called by the security system, not by application code.

14 TransportType enumeration (System.Net)

15 ToString

16
17
18 *Description*

19 Defines transport types for the **System.Net.SocketPermission** and
20 **System.Net.Sockets.Socket** classes.

21 The **System.Net.TransportType** enumeration defines transport types for
22 the **System.Net.SocketPermission** and **System.Net.Sockets.Socket** classes.

23 ToString

24
25 [C#] public const TransportType All;

1 [C++] public: const TransportType All;
 2 [VB] Public Const All As TransportType
 3 [JScript] public var All : TransportType;

4
 5 *Description*

6 All transport types.

7 ToString

8
 9 [C#] public const TransportType Connectionless;
 10 [C++] public: const TransportType Connectionless;
 11 [VB] Public Const Connectionless As TransportType
 12 [JScript] public var Connectionless : TransportType;

13
 14 *Description*

15 The transport type is connectionless, such as UDP.

16 ToString

17
 18 [C#] public const TransportType ConnectionOriented;
 19 [C++] public: const TransportType ConnectionOriented;
 20 [VB] Public Const ConnectionOriented As TransportType
 21 [JScript] public var ConnectionOriented : TransportType;

22
 23 *Description*

24 The transport is connection oriented, such as TCP.

25 ToString

```

1
2 [C#] public const TransportType Tcp;
3 [C++] public: const TransportType Tcp;
4 [VB] Public Const Tcp As TransportType
5 [JScript] public var Tcp : TransportType;
6

```

Description

TCP transport.

ToString

```

11 [C#] public const TransportType Udp;
12 [C++] public: const TransportType Udp;
13 [VB] Public Const Udp As TransportType
14 [JScript] public var Udp : TransportType;
15

```

Description

UDP transport.

WebClient class (System.Net)

ToString

Description

Provides common methods for sending data to and receiving data from a resource identified by a URI. This class cannot be inherited.

1 The **System.Net.WebClient** class provides common methods for sending
2 data to or receiving data from any local, Intranet, or Internet resource identified by
3 a URI.

4 WebClient

5 *Example Syntax:*

6 ToString

7
8 [C#] public WebClient();

9 [C++] public: WebClient();

10 [VB] Public Sub New()

11 [JScript] public function WebClient();

12
13 *Description*

14 Initializes a new instance of the **System.Net.WebClient** class.

15 The default constructor creates a new instance of the
16 **System.Net.WebClient** class with all fields set to **null** .

17 BaseAddress

18 ToString

19
20 [C#] public string BaseAddress {get; set;}

21 [C++] public: __property String* get_BaseAddress();public: __property void
22 set_BaseAddress(String*);

23 [VB] Public Property BaseAddress As String

24 [JScript] public function get BaseAddress() : String;public function set
25 BaseAddress(String);

1
2 *Description*

3 Gets or sets the base URI for requests made by a **System.Net.WebClient** .

4 The **System.Net.WebClient.BaseAddress** property contains a base URI
5 that is combined with the relative address specified when calling an upload or
6 download method.

7 Container

8 Credentials

9 ToString

10
11
12 *Description*

13 Gets or sets the network credentials used for authenticating the request with
14 the Internet resource.

15 The **System.Net.WebClient.Credentials** property contains the
16 authentication credentials required to access the Internet resource.

17 DesignMode

18 Events

19 Headers

20 ToString

21
22
23 *Description*

24 Gets or sets a collection of header name/value pairs associated with the
25 request.

The **System.Net.WebClient.Headers** property contains a **System.Net.WebHeaderCollection** instance containing header information the **System.Net.WebClient** sends to the Internet resource. This is an unrestricted collection of headers, so setting headers that are restricted by **System.Net.WebRequest** descendants like **System.Net.HttpWebRequest** is allowed.

QueryString

ToString

[C#] public NameValueCollection QueryString {get; set;}

[C++] public: __property NameValueCollection* get_QueryString();public:

__property void set_QueryString(NameValueCollection*);

[VB] Public Property QueryString As NameValueCollection

[JScript] public function get QueryString() : NameValueCollection;public function

set QueryString(NameValueCollection);

Description

Gets or sets a collection of query name/value pairs associated with the request.

The **System.Net.WebClient.QueryString** property contains a **System.Collections.Specialized.NameValueCollection** instance containing name/value pairs that are appended to the URI as a query string. The contents of the **System.Net.WebClient.QueryString** property are preceded by a question mark (?), and each name/value pair is separated by an ampersand (&).

ResponseHeaders

ToString

```
[C#] public WebHeaderCollection ResponseHeaders {get;}
[C++] public: __property WebHeaderCollection* get_ResponseHeaders();
[VB] Public ReadOnly Property ResponseHeaders As WebHeaderCollection
[JScript] public function get ResponseHeaders() : WebHeaderCollection;
```

Description

Gets a collection of header name/value pairs associated with the response.

The **System.Net.WebClient.ResponseHeaders** property contains a **System.Net.WebHeaderCollection** instance containing header information the **System.Net.WebClient** receives from the Internet resource.

Site

DownloadData

```
[C#] public byte[] DownloadData(string address);
[C++] public: unsigned char DownloadData(String* address) __gc[];
[VB] Public Function DownloadData(ByVal address As String) As Byte()
[JScript] public function DownloadData(address : String) : Byte[];
```

Description

Downloads data from a resource identified by a URI.

Return Value: A byte array containing the data downloaded from the resource specified by *address* .

1 The **System.Net.WebClient.DownloadData(System.String)** method
2 downloads the data from the URI specified by *address* to a local byte array. The
3 URI from which the data will be downloaded.

4 DownloadFile

5
6 [C#] public void DownloadFile(string address, string fileName);
7 [C++] public: void DownloadFile(String* address, String* fileName);
8 [VB] Public Sub DownloadFile(ByVal address As String, ByVal fileName As
9 String)
10 [JScript] public function DownloadFile(address : String, fileName : String);
11

12 Description

13 Downloads data from a resource identified by a URI to a local file.

14 The

15 **System.Net.WebClient.DownloadFile(System.String, System.String)** method
16 downloads the data from the URI specified by *address* to a local file. The URI
17 from which the data will be downloaded. The name of the local file to receive the
18 data.

19 OpenRead

20
21 [C#] public Stream OpenRead(string address);
22 [C++] public: Stream* OpenRead(String* address);
23 [VB] Public Function OpenRead(ByVal address As String) As Stream
24 [JScript] public function OpenRead(address : String) : Stream;
25

Description

Opens a readable stream for the data downloaded from a resource identified by a URI.

Return Value: A **System.IO.Stream** used to read data from a resource.

The **System.Net.WebClient.OpenRead(System.String)** method creates a **System.IO.Stream** instance used to access the data specified by *address* . The URI from which the data will be downloaded.

OpenWrite

[C#] public Stream OpenWrite(string address);

[C++] public: Stream* OpenWrite(String* address);

[VB] Public Function OpenWrite(ByVal address As String) As Stream

[JScript] public function OpenWrite(address : String) : Stream; Opens a stream for writing data to a resource identified by a URI.

Description

Opens a stream for writing data to the specified resource.

Return Value: A **System.IO.Stream** used to write data to the resource.

The **System.Net.WebClient.OpenWrite(System.String)** method returns a writable stream that is used to send data to a resource. The underlying request is made with the POST method. The URI of the resource to receive the data.

OpenWrite

[C#] public Stream OpenWrite(string address, string method);

1 [C++] public: Stream* OpenWrite(String* address, String* method);

2 [VB] Public Function OpenWrite(ByVal address As String, ByVal method As
3 String) As Stream

4 [JScript] public function OpenWrite(address : String, method : String) : Stream;

5
6 *Description*

7 Opens a stream for writing data to the specified resource identified by a
8 URI using the specified method.

9 *Return Value:* A **System.IO.Stream** used to write data to the resource.

10 The **System.Net.WebClient.OpenWrite(System.String)** method returns a
11 writable stream that is used to send data to a resource. The underlying request is
12 made with the method specified in the *method* parameter. The URI of the resource
13 to receive the data. The method used to send the data to the resource.

14 **UploadData**

15
16 [C#] public byte[] UploadData(string address, byte[] data);

17 [C++] public: unsigned char UploadData(String* address, unsigned char data
18 __gc[]) __gc[];

19 [VB] Public Function UploadData(ByVal address As String, ByVal data() As
20 Byte) As Byte()

21 [JScript] public function UploadData(address : String, data : Byte[]) : Byte[];

22 Uploads a data buffer to a resource identified by a URI.

23
24 *Description*

Uploads a data buffer to the resource identified by a URI.

Return Value: An array of bytes containing the body of any response from the resource.

The **System.Net.WebClient.UploadData(System.String,System.Byte[])** method sends a data buffer to a resource. The underlying request is made using the POST method. The URI of the resource to receive the data. The data buffer to send to the resource.

UploadData

[C#] public byte[] UploadData(string address, string method, byte[] data);

[C++] public: unsigned char UploadData(String* address, String* method, unsigned char data __gc[]) __gc[];

[VB] Public Function UploadData(ByVal address As String, ByVal method As String, ByVal data() As Byte) As Byte()

[JScript] public function UploadData(address : String, method : String, data : Byte[]) : Byte[];

Description

Uploads a data buffer to the specified resource identified by a URI using the specified method.

Return Value: An array of bytes containing the body of any response from the resource.

The **System.Net.WebClient.UploadData(System.String,System.Byte[])** method sends a data buffer to a resource using the method specified in the *method* parameter, and returns any response from the server. The URI of the resource to

receive the data. The method used to send the data to the resource. The data buffer to send to the resource.

UploadFile

[C#] public byte[] UploadFile(string address, string fileName);

[C++] public: unsigned char UploadFile(String* address, String* fileName)

__gc[];

[VB] Public Function UploadFile(ByVal address As String, ByVal fileName As String) As Byte()

[JScript] public function UploadFile(address : String, fileName : String) : Byte[];

Uploads a local file to a resource identified by a URI.

Description

Uploads the specified local file to the resource identified by a URI.

Return Value: An array of bytes containing the body of any response from the resource.

The **System.Net.WebClient.UploadFile(System.String,System.String)** method sends a local file to a resource. The underlying request is made using the POST method. The URI of the resource to receive the file. The file to send to the resource.

UploadFile

[C#] public byte[] UploadFile(string address, string method, string fileName);

[C++] public: unsigned char UploadFile(String* address, String* method, String* fileName) __gc[];

```

1 [VB] Public Function UploadFile(ByVal address As String, ByVal method As
2 String, ByVal fileName As String) As Byte()
3 [JScript] public function UploadFile(address : String, method : String, fileName :
4 String) : Byte[];

```

Description

Uploads the specified local file to the specified resource identified by a URI using the specified method.

Return Value: An array of bytes containing the body of any response from the resource.

The **System.Net.WebClient.UploadFile(System.String,System.String)** method sends a local file to a resource using the method specified in the *method* parameter, and returns any response from the server. The URI of the resource to receive the file. The method used to send the file to the resource. The file to send to the resource.

UploadValues

```

18 [C#] public byte[] UploadValues(string address, NameValueCollection data);
19 [C++] public: unsigned char UploadValues(String* address,
20 NameValueCollection* data) __gc[];
21 [VB] Public Function UploadValues(ByVal address As String, ByVal data As
22 NameValueCollection) As Byte()
23 [JScript] public function UploadValues(address : String, data :
24 NameValueCollection) : Byte[]; Uploads a name/value collection to a resource
25 identified by a URI.

```

1
2 *Description*

3 Uploads the specified name/value collection to the specified resource
4 identified by a URI.

5 *Return Value:* An array of bytes containing the body of any response from the
6 resource.

7 The
8 **System.Net.WebClient.UploadValues(System.String,System.Collections.Speci**
9 **alized.NameValueCollection)** method sends a
10 **System.Collections.Specialized.NameValueCollection** to an Internet server. The
11 underlying request is made using the POST method. The URI of the resource to
12 receive the collection. The

13 **System.Collections.Specialized.NameValueCollection** to send to the resource.

14 **UploadValues**

15
16 [C#] public byte[] UploadValues(string address, string method,
17 NameValueCollection data);

18 [C++] public: unsigned char UploadValues(String* address, String* method,
19 NameValueCollection* data) __gc[];

20 [VB] Public Function UploadValues(ByVal address As String, ByVal method As
21 String, ByVal data As NameValueCollection) As Byte()

22 [JScript] public function UploadValues(address : String, method : String, data :
23 NameValueCollection) : Byte[];

24
25 *Description*

Uploads the specified name/value collection to the specified resource identified by a URI using the specified method.

Return Value: An array of bytes containing the body of any response from the resource.

The **System.Net.WebClient.UploadValues(System.String,System.Collections.Specialized.NameValueCollection)** method sends a **System.Collections.Specialized.NameValueCollection** to a resource using the method specified in the *method* parameter, and returns any response from the server. The URI of the resource to receive the collection. The method used to send the file to the resource. The **System.Collections.Specialized.NameValueCollection** to send to the resource.

WebException class (System.Net)

UploadValues

Description

The exception that is thrown when an error occurs while accessing the network through a pluggable protocol.

The **System.Net.WebException** class is thrown by classes descended from **System.Net.WebRequest** and **System.Net.WebResponse** that implement pluggable protocols for accessing the Internet.

WebException

Example Syntax:

UploadValues

1
2 [C#] public WebException();

3 [C++] public: WebException();

4 [VB] Public Sub New()

5 [JScript] public function WebException(); Initializes a new instance of the

6 **System.Net.WebException** class.

7
8 *Description*

9 Initializes a new instance of the **System.Net.WebException** class.

10 The default constructor initializes a new instance of the
11 **System.Net.WebException** class with all fields set to **null** .

12 WebException

13 *Example Syntax:*

14 UploadValues

15
16 [C#] public WebException(string message);

17 [C++] public: WebException(String* message);

18 [VB] Public Sub New(ByVal message As String)

19 [JScript] public function WebException(message : String);

20
21 *Description*

22 Initializes a new instance of the **System.Net.WebException** class with the
23 specified error message.

1 The **System.Net.WebException** instance is initialized with the
2 **System.Exception.Message** property set to the value of *message* . The text of the
3 error message.

4 WebException

5 *Example Syntax:*

6 UploadValues

7
8 [C#] protected WebException(SerializationInfo serializationInfo,
9 StreamingContext streamingContext);

10 [C++] protected: WebException(SerializationInfo* serializationInfo,
11 StreamingContext streamingContext);

12 [VB] Protected Sub New(ByVal serializationInfo As SerializationInfo, ByVal
13 streamingContext As StreamingContext)

14 [JScript] protected function WebException(serializationInfo : SerializationInfo,
15 streamingContext : StreamingContext);

16 WebException

17 *Example Syntax:*

18 UploadValues

19
20 [C#] public WebException(string message, Exception innerException);

21 [C++] public: WebException(String* message, Exception* innerException);

22 [VB] Public Sub New(ByVal message As String, ByVal innerException As
23 Exception)

24 [JScript] public function WebException(message : String, innerException :
25 Exception);

Description

Initializes a new instance of the **System.Net.WebException** class with the specified error message and nested exception.

The **System.Net.WebException** instance is initialized with the **System.Exception.Message** property set to the value of *message* and the **System.Exception.InnerException** property set to the value of *innerException* .
The text of the error message. A nested exception.

WebException

Example Syntax:

UploadValues

```
[C#] public WebException(string message, WebExceptionStatus status);
```

```
[C++] public: WebException(String* message, WebExceptionStatus status);
```

```
[VB] Public Sub New(ByVal message As String, ByVal status As  
WebExceptionStatus)
```

```
[JScript] public function WebException(message : String, status :  
WebExceptionStatus);
```

Description

Initializes a new instance of the **System.Net.WebException** class with the specified error message and status.

The **System.Net.WebException** instance is initialized with the **System.Exception.Message** property set to the value of *message* and the

System.Net.WebException.Status property set to the value of *status* . The text of the error message. One of the **System.Net.WebExceptionStatus** values.

WebException

Example Syntax:

UploadValues

```
[C#] public WebException(string message, Exception innerException,  
WebExceptionStatus status, WebResponse response);
```

```
[C++] public: WebException(String* message, Exception* innerException,  
WebExceptionStatus status, WebResponse* response);
```

```
[VB] Public Sub New(ByVal message As String, ByVal innerException As  
Exception, ByVal status As WebExceptionStatus, ByVal response As  
WebResponse)
```

```
[JScript] public function WebException(message : String, innerException :  
Exception, status : WebExceptionStatus, response : WebResponse);
```

Description

Initializes a new instance of the **System.Net.WebException** class with the specified error message, nested exception, status, and response.

The **System.Net.WebException** instance is initialized with the **System.Exception.Message** property set to the value of *message* , the **System.Exception.InnerException** property set to the value of *innerException* , the **System.Net.WebException.Status** property set to the value of *status* , and the **System.Net.WebException.Response** property set to *response* . The text of the error message. A nested exception. One of the **System.Net.WebExceptionStatus**

values. A **System.Net.WebResponse** instance containing the response from the remote host.

HelpLink

HResult

InnerException

Message

Response

UploadValues

Description

Gets the response that the remote host returned.

Some Internet protocols, such as HTTP, return otherwise valid responses indicating that an error has occurred at the protocol level. When the response to an Internet request indicates an error, **System.Net.WebRequest.GetResponse** sets the **System.Net.WebException.Status** property to **System.Net.WebExceptionStatus.ProtocolError** and provides the **System.Net.WebResponse** containing the error message in the **System.Net.WebException.Response** property of the **System.Net.WebException** that was thrown. The application can examine the **System.Net.WebResponse** to determine the actual error.

Source

StackTrace

Status

UploadValues

1
2
3 *Description*

4 Gets the status of the response.

5 The **System.Net.WebException.Status** property indicates the reason for
6 the **System.Net.WebException** .

7 TargetSite

8 ISerializable.GetObjectData

9
10 [C#] void ISerializable.GetObjectData(SerializationInfo serializationInfo,
11 StreamingContext streamingContext);

12 [C++] void ISerializable::GetObjectData(SerializationInfo* serializationInfo,
13 StreamingContext streamingContext);

14 [VB] Sub GetObjectData(ByVal serializationInfo As SerializationInfo, ByVal
15 streamingContext As StreamingContext) Implements ISerializable.GetObjectData

16 [JScript] function ISerializable.GetObjectData(serializationInfo : SerializationInfo,
17 streamingContext : StreamingContext);

18 WebExceptionStatus enumeration (System.Net)

19 ToString
20
21

22 *Description*

23 Defines status codes for the **System.Net.WebException** class.

24 The **System.Net.WebExceptionStatus** enumeration defines the status
25 codes assigned to the **System.Net.WebException.Status** property.

ToString

[C#] public const WebExceptionStatus ConnectFailure;
[C++] public: const WebExceptionStatus ConnectFailure;
[VB] Public Const ConnectFailure As WebExceptionStatus
[JScript] public var ConnectFailure : WebExceptionStatus;

Description

The remote service point could not be contacted at the transport level.

ToString

[C#] public const WebExceptionStatus ConnectionClosed;
[C++] public: const WebExceptionStatus ConnectionClosed;
[VB] Public Const ConnectionClosed As WebExceptionStatus
[JScript] public var ConnectionClosed : WebExceptionStatus;

Description

The connection was prematurely closed.

ToString

[C#] public const WebExceptionStatus KeepAliveFailure;
[C++] public: const WebExceptionStatus KeepAliveFailure;
[VB] Public Const KeepAliveFailure As WebExceptionStatus
[JScript] public var KeepAliveFailure : WebExceptionStatus;

1
2 *Description*

3 The connection for a request that specifies the Keep-alive header was
4 closed unexpectedly.

5 ToString

6
7 [C#] public const WebExceptionStatus NameResolutionFailure;

8 [C++] public: const WebExceptionStatus NameResolutionFailure;

9 [VB] Public Const NameResolutionFailure As WebExceptionStatus

10 [JScript] public var NameResolutionFailure : WebExceptionStatus;

11
12 *Description*

13 The name resolver service could not resolve the host name.

14 ToString

15
16 [C#] public const WebExceptionStatus Pending;

17 [C++] public: const WebExceptionStatus Pending;

18 [VB] Public Const Pending As WebExceptionStatus

19 [JScript] public var Pending : WebExceptionStatus;

20
21 *Description*

22 An internal asynchronous request is pending.

23 ToString

24
25 [C#] public const WebExceptionStatus PipelineFailure;

1 [C++] public: const WebExceptionStatus PipelineFailure;
2 [VB] Public Const PipelineFailure As WebExceptionStatus
3 [JScript] public var PipelineFailure : WebExceptionStatus;

4
5 *Description*

6 ToString

7
8 [C#] public const WebExceptionStatus ProtocolError;
9 [C++] public: const WebExceptionStatus ProtocolError;
10 [VB] Public Const ProtocolError As WebExceptionStatus
11 [JScript] public var ProtocolError : WebExceptionStatus;

12
13 *Description*

14 The response received from the server was complete but indicated a
15 protocol-level error. For example, an HTTP protocol error such as 401 Access
16 Denied would use this status.

17 ToString

18
19 [C#] public const WebExceptionStatus ProxyNameResolutionFailure;
20 [C++] public: const WebExceptionStatus ProxyNameResolutionFailure;
21 [VB] Public Const ProxyNameResolutionFailure As WebExceptionStatus
22 [JScript] public var ProxyNameResolutionFailure : WebExceptionStatus;

23
24 *Description*

25 The name resolver service could not resolve the proxy host name.

ToString

[C#] public const WebExceptionStatus ReceiveFailure;
[C++] public: const WebExceptionStatus ReceiveFailure;
[VB] Public Const ReceiveFailure As WebExceptionStatus
[JScript] public var ReceiveFailure : WebExceptionStatus;

Description

A complete response was not received from the remote server.

ToString

[C#] public const WebExceptionStatus RequestCanceled;
[C++] public: const WebExceptionStatus RequestCanceled;
[VB] Public Const RequestCanceled As WebExceptionStatus
[JScript] public var RequestCanceled : WebExceptionStatus;

Description

The request was canceled or the **System.Net.WebRequest.Abort** method was called.

ToString

[C#] public const WebExceptionStatus SecureChannelFailure;
[C++] public: const WebExceptionStatus SecureChannelFailure;
[VB] Public Const SecureChannelFailure As WebExceptionStatus
[JScript] public var SecureChannelFailure : WebExceptionStatus;

1
2 *Description*

3 An error occurred in a secure channel link.

4 ToString

5
6 [C#] public const WebExceptionStatus SendFailure;

7 [C++] public: const WebExceptionStatus SendFailure;

8 [VB] Public Const SendFailure As WebExceptionStatus

9 [JScript] public var SendFailure : WebExceptionStatus;

10
11 *Description*

12 A complete request could not be sent to the remote server.

13 ToString

14
15 [C#] public const WebExceptionStatus ServerProtocolViolation;

16 [C++] public: const WebExceptionStatus ServerProtocolViolation;

17 [VB] Public Const ServerProtocolViolation As WebExceptionStatus

18 [JScript] public var ServerProtocolViolation : WebExceptionStatus;

19
20 *Description*

21 The server response was not a valid HTTP response.

22 ToString

23
24 [C#] public const WebExceptionStatus Success;

25 [C++] public: const WebExceptionStatus Success;

1 [VB] Public Const Success As WebExceptionStatus

2 [JScript] public var Success : WebExceptionStatus;

3
4 *Description*

5 No error was encountered. This is the default value for

6 **System.Net.WebException.Status** .

7 ToString

8
9 [C#] public const WebExceptionStatus Timeout;

10 [C++] public: const WebExceptionStatus Timeout;

11 [VB] Public Const Timeout As WebExceptionStatus

12 [JScript] public var Timeout : WebExceptionStatus;

13
14 *Description*

15 No response was received during the timeout period for a request.

16 ToString

17
18 [C#] public const WebExceptionStatus TrustFailure;

19 [C++] public: const WebExceptionStatus TrustFailure;

20 [VB] Public Const TrustFailure As WebExceptionStatus

21 [JScript] public var TrustFailure : WebExceptionStatus;

22
23 *Description*

24 A server certificate could not be validated.

25 WebHeaderCollection class (System.Net)

ToString

Description

Contains protocol headers associated with a request or response.

The **System.Net.WebHeaderCollection** class is generally accessed through **System.Net.WebRequest.Headers** or **System.Net.WebResponse.Headers**. Some common headers are considered restricted and are either exposed directly by the API (such as **Content-Type**) or protected by the system and cannot be changed.

WebHeaderCollection

Example Syntax:

ToString

[C#] public WebHeaderCollection();

[C++] public: WebHeaderCollection();

[VB] Public Sub New()

[JScript] public function WebHeaderCollection(); Initializes a new instance of the **System.Net.WebHeaderCollection** class.

Description

Initializes a new instance of the **System.Net.WebHeaderCollection** class.

WebHeaderCollection

Example Syntax:

ToString

```

1
2 [C#] protected WebHeaderCollection(SerializationInfo serializationInfo,
3 StreamingContext streamingContext);
4 [C++] protected: WebHeaderCollection(SerializationInfo* serializationInfo,
5 StreamingContext streamingContext);
6 [VB] Protected Sub New(ByVal serializationInfo As SerializationInfo, ByVal
7 streamingContext As StreamingContext)
8 [JScript] protected function WebHeaderCollection(serializationInfo :
9 SerializationInfo, streamingContext : StreamingContext);
10

```

Description

Initializes a new instance of the **System.Net.WebHeaderCollection** class from the specified instances of the **System.Runtime.Serialization.SerializationInfo** and **System.Runtime.Serialization.StreamingContext** classes.

This constructor implements the **System.Runtime.Serialization.ISerializable** interface for the **System.Net.WebHeaderCollection** class. A **System.Runtime.Serialization.SerializationInfo** containing the information required to serialize the **System.Net.WebHeaderCollection**. A **System.Runtime.Serialization.StreamingContext** containing the source of the serialized stream associated with the new **System.Net.WebHeaderCollection**.

AllKeys

Count

IsReadOnly

Item

Item

Keys

Add

[C#] public void Add(string header);

[C++] public: void Add(String* header);

[VB] Public Sub Add(ByVal header As String)

[JScript] public function Add(header : String);

Description

Inserts the specified header into the collection.

The

System.Net.WebHeaderCollection.Add(System.String,System.String) method

inserts a new header into the list of header name/value pairs. The header value must be specified in the format "header:value". The header to add, with the name and value separated by a colon.

Add

[C#] public override void Add(string name, string value);

[C++] public: void Add(String* name, String* value);

[VB] Overrides Public Sub Add(ByVal name As String, ByVal value As String)

[JScript] public override function Add(name : String, value : String); Inserts a new header into the collection.

1
2 *Description*

3 Inserts a new header with the specified name and value into the collection.

4 The

5 **System.Net.WebHeaderCollection.Add(System.String,System.String)** method
6 inserts a new header into the list of header name/value pairs. The header to add to
7 the collection. The content of the header.

8 **AddWithoutValidate**

9
10 [C#] protected void AddWithoutValidate(string headerName, string headerValue);

11 [C++] protected: void AddWithoutValidate(String* headerName, String*
12 headerValue);

13 [VB] Protected Sub AddWithoutValidate(ByVal headerName As String, ByVal
14 headerValue As String)

15 [JScript] protected function AddWithoutValidate(headerName : String,
16 headerValue : String);

17
18 *Description*

19 Inserts a header into the collection without checking whether the header is
20 on the restricted header list.

21 The

22 **System.Net.WebHeaderCollection.AddWithoutValidate(System.String,Syste**
23 **m.String)** method adds a header to the collection without checking whether the
24 header is on the restricted header list. The header to add to the collection. The
25 content of the header.

GetValues

[C#] public override string[] GetValues(string header);
[C++] public: String* GetValues(String* header) __gc[];
[VB] Overrides Public Function GetValues(ByVal header As String) As String()
[JScript] public override function GetValues(header : String) : String[]; Gets an array of header values stored in a header.

Description

Gets an array of header values stored in a header.

Return Value: An array of header strings.

System.Net.WebHeaderCollection.GetValues(System.String) returns the contents of the specified header as an array. The header to return.

IsRestricted

[C#] public static bool IsRestricted(string headerName);
[C++] public: static bool IsRestricted(String* headerName);
[VB] Public Shared Function IsRestricted(ByVal headerName As String) As Boolean
[JScript] public static function IsRestricted(headerName : String) : Boolean;

Description

Tests whether the specified HTTP header can be set.

Return Value: **true** if the header is restricted; otherwise **false** .

The **System.Net.WebHeaderCollection.IsRestricted(System.String)**

method returns **true** to indicate that a header is restricted and must be set using properties instead of directly. The restricted headers are: Accept Connection Date Expect Host Range Referer Tests if access to the HTTP header with the provided name is accessible for setting. The header to test.

OnDeserialization

[C#] public override void OnDeserialization(object sender);

[C++] public: void OnDeserialization(Object* sender);

[VB] Overrides Public Sub OnDeserialization(ByVal sender As Object)

[JScript] public override function OnDeserialization(sender : Object);

Description

Remove

[C#] public override void Remove(string name);

[C++] public: void Remove(String* name);

[VB] Overrides Public Sub Remove(ByVal name As String)

[JScript] public override function Remove(name : String);

Description

Removes the specified header from the collection.

System.Net.WebHeaderCollection.Remove(System.String) deletes the specified header from the collection. If the same header was added multiple times

with **System.Net.WebHeaderCollection.Add(System.String,System.String)** , a single call to **System.Net.WebHeaderCollection.Remove(System.String)** deletes all of the headers. The name of the header to remove from the collection.

Set

[C#] public override void Set(string name, string value);

[C++] public: void Set(String* name, String* value);

[VB] Overrides Public Sub Set(ByVal name As String, ByVal value As String)

[JScript] public override function Set(name : String, value : String);

Description

Sets the specified header to the specified value.

The

System.Net.WebHeaderCollection.Set(System.String,System.String) method inserts a new header into the list of header name/value pairs. The header value must be specified in the format header:value. The header to set. The content of the header to set.

ISerializable.GetObjectData

[C#] void ISerializable.GetObjectData(SerializationInfo serializationInfo, StreamingContext streamingContext);

[C++] void ISerializable::GetObjectData(SerializationInfo* serializationInfo, StreamingContext streamingContext);

[VB] Sub GetObjectData(ByVal serializationInfo As SerializationInfo, ByVal streamingContext As StreamingContext) Implements ISerializable.GetObjectData

1 [JScript] function ISerializable.GetObjectData(serializationInfo : SerializationInfo,
2 streamingContext : StreamingContext);

3 ToArray
4

5 [C#] public byte[] ToByteArray();

6 [C++] public: unsigned char ToByteArray() __gc[];

7 [VB] Public Function ToByteArray() As Byte()

8 [JScript] public function ToByteArray() : Byte[];

9
10 *Description*

11 Obsolete.

12 ToString
13

14 [C#] public override string ToString();

15 [C++] public: String* ToString();

16 [VB] Overrides Public Function ToString() As String

17 [JScript] public override function ToString() : String;

18
19 *Description*

20 Obsolete.

21 WebPermission class (System.Net)

22 ToString
23

24
25 *Description*

Controls rights to access an Internet resource.

WebPermission

Example Syntax:

ToString

[C#] public WebPermission();

[C++] public: WebPermission();

[VB] Public Sub New()

[JScript] public function WebPermission();

Description

Creates a new instance of the **System.Net.WebPermission** class.

WebPermission

Example Syntax:

ToString

[C#] public WebPermission(PermissionState state);

[C++] public: WebPermission(PermissionState state);

[VB] Public Sub New(ByVal state As PermissionState)

[JScript] public function WebPermission(state : PermissionState); Creates a new instance of the **System.Net.WebPermission** class.

Description

Creates a new instance of the **System.Net.WebPermission** class that passes all demands or fails all demands.

If **System.Net.WebPermission** is created with the **Unrestricted** value from **System.Security.Permissions.PermissionState** then the **System.Net.WebPermission** instance will pass all demands. Any other value for **state** will result in a **System.Net.WebPermission** instance that will fail all demands. One of the **System.Security.Permissions.PermissionState** values.

WebPermission

Example Syntax:

ToString

[C#] public WebPermission(NetworkAccess access, Regex uriRegex);

[C++] public: WebPermission(NetworkAccess access, Regex* uriRegex);

[VB] Public Sub New(ByVal access As NetworkAccess, ByVal uriRegex As Regex)

[JScript] public function WebPermission(access : NetworkAccess, uriRegex : Regex);

Description

Initializes a new instance of the **System.Net.WebPermission** class with the specified access rights for the specified URI regular expression. The access right to grant. A regular expression describing the URI to grant the access right to.

WebPermission

Example Syntax:

ToString

[C#] public WebPermission(NetworkAccess access, string uriString);

```

1 [C++] public: WebPermission(NetworkAccess access, String* uriString);
2 [VB] Public Sub New(ByVal access As NetworkAccess, ByVal uriString As
3 String)
4 [JScript] public function WebPermission(access : NetworkAccess, uriString :
5 String);
6

```

Description

Initializes a new instance of the **System.Net.WebPermission** class with the specified access rights for the specified URI. The access right to grant. A regular expression describing the URI to grant the access right to.

AcceptList

ToString

```

14 [C#] public IEnumerable AcceptList {get;}
15 [C++] public: __property IEnumerable* get_AcceptList();
16 [VB] Public ReadOnly Property AcceptList As IEnumerable
17 [JScript] public function get AcceptList() : IEnumerable;
18

```

Description

Returns the enumeration of permissions to export a local URI.

ConnectList

ToString

```

24 [C#] public IEnumerable ConnectList {get;}
25 [C++] public: __property IEnumerable* get_ConnectList();

```

1 [VB] Public ReadOnly Property ConnectList As IEnumerable

2 [JScript] public function get ConnectList() : IEnumerable;

4 *Description*

5 Returns the enumeration of permissions to connect a remote URI.

6 **AddPermission**

8 [C#] public void AddPermission(NetworkAccess access, Regex uriRegex);

9 [C++] public: void AddPermission(NetworkAccess access, Regex* uriRegex);

10 [VB] Public Sub AddPermission(ByVal access As NetworkAccess, ByVal
11 uriRegex As Regex)

12 [JScript] public function AddPermission(access : NetworkAccess, uriRegex :
13 Regex);

15 *Description*

16 Adds a new instance of the **System.Net.WebPermission** class with the
17 specified access rights for the specified URI pattern. The access right to grant. A
18 regular expression describing the URI to grant the access right to.

19 **AddPermission**

21 [C#] public void AddPermission(NetworkAccess access, string uriString);

22 [C++] public: void AddPermission(NetworkAccess access, String* uriString);

23 [VB] Public Sub AddPermission(ByVal access As NetworkAccess, ByVal
24 uriString As String)

25 [JScript] public function AddPermission(access : NetworkAccess, uriString :

String); Adds a new instance of the **System.Net.WebPermission** class with the specified access rights for the specified URI.

Description

Adds a new instance of the **System.Net.WebPermission** class with the specified access rights for the specified URI. The access right to grant. A string describing the URI to grant the access right to.

Copy

[C#] public override IPPermission Copy();

[C++] public: IPPermission* Copy();

[VB] Overrides Public Function Copy() As IPPermission

[JScript] public override function Copy() : IPPermission;

Description

Creates a copy of a **System.Net.WebPermission** instance.

Return Value: A new instance of the **System.Net.WebPermission** class that is a copy of the current instance.

FromXml

[C#] public override void FromXml(SecurityElement securityElement);

[C++] public: void FromXml(SecurityElement* securityElement);

[VB] Overrides Public Sub FromXml(ByVal securityElement As SecurityElement)

[JScript] public override function FromXml(securityElement : SecurityElement);

1
2 *Description*

3 Reconstructs a **System.Net.WebPermission** instance from an XML
4 encoding.

5 The
6 **System.Net.WebPermission.FromXml(System.Security.SecurityElement)**
7 method reconstructs a **System.Net.WebPermission** instance from an XML
8 encoding defined by the **System.Security.SecurityElement** class. The XML
9 encoding to use to reconstruct the **System.Net.WebPermission** instance.

10 **Intersect**

11
12 [C#] public override IPPermission Intersect(IPPermission target);

13 [C++] public: IPPermission* Intersect(IPPermission* target);

14 [VB] Overrides Public Function Intersect(ByVal target As IPPermission) As
15 IPPermission

16 [JScript] public override function Intersect(target : IPPermission) : IPPermission;

17
18 *Description*

19 Returns the logical intersection between two **System.Net.WebPermission**
20 instances.

21 *Return Value:* **System.Net.WebPermission** instance that represents the
22 intersection of two **System.Net.WebPermission** instances. The
23 **System.Net.WebPermission** instance to combine with the current instance.

24 **IsSubsetOf**

1
2 [C#] public override bool IsSubsetOf(IPermission target);

3 [C++] public: bool IsSubsetOf(IPermission* target);

4 [VB] Overrides Public Function IsSubsetOf(ByVal target As IPermission) As

5 Boolean

6 [JScript] public override function IsSubsetOf(target : IPermission) : Boolean;

7
8 *Description*

9 Compares two **System.Net.WebPermission** instances.

10 *Return Value:* **false** if *target* is **null** ; otherwise an exception is thrown.

11 The

12 **System.Net.WebPermission.IsSubsetOf(System.Security.IPermission)** method

13 is not supported by the **System.Net.WebPermission** class. The second

14 **System.Net.WebPermission** instance to compare.

15 IsUnrestricted

16
17 [C#] public bool IsUnrestricted();

18 [C++] public: __sealed bool IsUnrestricted();

19 [VB] NotOverridable Public Function IsUnrestricted() As Boolean

20 [JScript] public function IsUnrestricted() : Boolean;

21
22 *Description*

23 Checks the overall permission state of the object.

24 *Return Value:* true if the **System.Net.WebPermission** instance was created with

the **Unrestricted** value from **System.Security.Permissions.PermissionState** ;
otherwise, **false** .

ToXml

[C#] public override SecurityElement ToXml();

[C++] public: SecurityElement* ToXml();

[VB] Overrides Public Function ToXml() As SecurityElement

[JScript] public override function ToXml() : SecurityElement;

Description

Creates an XML encoding of a **System.Net.WebPermission** instance and its current state.

Return Value: A **System.Security.SecurityElement** instance containing an XML-encoded representation of the **System.Net.WebPermission** instance, including state information.

The **System.Net.WebPermission.ToXml** method creates a **System.Security.SecurityElement** instance to XML-encode a representation of the **System.Net.WebPermission** instance, including state information.

Union

[C#] public override IPPermission Union(IPPermission target);

[C++] public: IPPermission* Union(IPPermission* target);

[VB] Overrides Public Function Union(ByVal target As IPPermission) As

IPPermission

[JScript] public override function Union(target : IPPermission) : IPPermission;

1
2 *Description*

3 Returns the logical union between two **System.Net.WebPermission**
4 instances.

5 *Return Value:* **System.Net.WebPermission** instance that represents the union of
6 two **System.Net.WebPermission** instances. The **System.Net.WebPermission**
7 instance to combine with the current instance.

8 WebPermissionAttribute class (System.Net)

9 Union

10
11
12 *Description*

13 Enables security actions for **System.Net.WebPermission** to be applied to
14 code using declarative security. This class cannot be inherited.

15 WebPermissionAttribute

16 *Example Syntax:*

17 Union

18
19 [C#] public WebPermissionAttribute(SecurityAction action);

20 [C++] public: WebPermissionAttribute(SecurityAction action);

21 [VB] Public Sub New(ByVal action As SecurityAction)

22 [JScript] public function WebPermissionAttribute(action : SecurityAction);

23
24 *Description*

1 Initializes a new instance of the **System.Net.WebPermissionAttribute**
2 class with the specified **System.Security.Permissions.SecurityAction** . One of
3 the **System.Security.Permissions.SecurityAction** values.

4 Accept

5 Union

6
7 [C#] public string Accept {get; set;}

8 [C++] public: __property String* get_Accept();public: __property void
9 set_Accept(String*);

10 [VB] Public Property Accept As String

11 [JScript] public function get Accept() : String;public function set Accept(String);

12
13 *Description*

14 Gets or sets the URI accepted by this permission instance.

15 AcceptPattern

16 Union

17
18 [C#] public string AcceptPattern {get; set;}

19 [C++] public: __property String* get_AcceptPattern();public: __property void
20 set_AcceptPattern(String*);

21 [VB] Public Property AcceptPattern As String

22 [JScript] public function get AcceptPattern() : String;public function set
23 AcceptPattern(String);

24
25 *Description*

1 Gets or sets a regular expression pattern that describes the URI accepted by
2 this permission instance.

3 Action

4 Connect

5 Union

6
7
8 *Description*

9 Gets or sets the URI connection controlled by this permission instance.

10 ConnectPattern

11 Union

12
13 [C#] public string ConnectPattern {get; set;}

14 [C++] public: __property String* get_ConnectPattern();public: __property void
15 set_ConnectPattern(String*);

16 [VB] Public Property ConnectPattern As String

17 [JScript] public function get ConnectPattern() : String;public function set
18 ConnectPattern(String);

19
20 *Description*

21 Gets or sets a regular expression pattern that describes the URI connection
22 controlled by this permission instance.

23 TypeId

24 Unrestricted

25 CreatePermission

1
2 [C#] public override IPPermission CreatePermission();

3 [C++] public: IPPermission* CreatePermission();

4 [VB] Overrides Public Function CreatePermission() As IPPermission

5 [JScript] public override function CreatePermission() : IPPermission;

6
7 *Description*

8 Creates and returns a new instance of the **System.Net.WebPermission**
9 class.

10 *Return Value:* A **System.Net.WebPermission** instance corresponding to the
11 security declaration.

12 WebProxy class (System.Net)

13 ToString

14
15
16 *Description*

17 Contains HTTP proxy settings for the **System.Net.WebRequest** class.

18 The **System.Net.WebProxy** class contains the proxy settings that
19 **System.Net.WebRequest** instances use to override the proxy settings in
20 **System.Net.GlobalProxySelection** .

21 WebProxy

22 *Example Syntax:*

23 ToString

24
25 [C#] public WebProxy();

1 [C++] public: WebProxy();

2 [VB] Public Sub New()

3 [JScript] public function WebProxy(); Initializes a new instance of the

4 **System.Net.WebProxy** class.

5
6 *Description*

7 Initializes an empty instance of the **System.Net.WebProxy** class.

8 The default constructor initializes an empty instance of the

9 **System.Net.WebProxy** class initializes an empty instance of the

10 **System.Net.WebProxy** class with the **System.Net.WebProxy.Address** property

11 set to **null**. When the **System.Net.WebProxy.Address** property is **null**, the

12 **System.Net.WebProxy.IsBypassed(System.Uri)** method returns **true**, and the

13 **System.Net.WebProxy.GetProxy(System.Uri)** method returns the destination
14 address.

15 WebProxy

16 *Example Syntax:*

17 ToString

18
19 [C#] public WebProxy(string Address);

20 [C++] public: WebProxy(String* Address);

21 [VB] Public Sub New(ByVal Address As String)

22 [JScript] public function WebProxy(Address : String);

23
24 *Description*

1 Initializes a new instance of the **System.Net.WebProxy** class with the
2 specified URI.

3 The **System.Net.WebProxy** instance is initialized with the
4 **System.Net.WebProxy.Address** property set to a **System.Uri** instance containing
5 *Address* . The URI of the proxy server.

6 WebProxy

7 *Example Syntax:*

8 ToString

9
10 [C#] public WebProxy(Uri Address);

11 [C++] public: WebProxy(Uri* Address);

12 [VB] Public Sub New(ByVal Address As Uri)

13 [JScript] public function WebProxy(Address : Uri);

14
15 *Description*

16 Initializes a new instance of the **System.Net.WebProxy** class from the
17 specified **System.Uri** .

18 The **System.Net.WebProxy** instance is initialized with the
19 **System.Net.WebProxy.Address** property set to the *Address* parameter. A
20 **System.Uri** containing the address of the proxy server.

21 WebProxy

22 *Example Syntax:*

23 ToString

24
25 [C#] protected WebProxy(SerializationInfo serializationInfo, StreamingContext

```

1 streamingContext);
2 [C++] protected: WebProxy(SerializationInfo* serializationInfo,
3 StreamingContext streamingContext);
4 [VB] Protected Sub New(ByVal serializationInfo As SerializationInfo, ByVal
5 streamingContext As StreamingContext)
6 [JScript] protected function WebProxy(serializationInfo : SerializationInfo,
7 streamingContext : StreamingContext);
8

```

Description

Initializes a new instance of the **System.Net.WebProxy** class from the specified instances of the **System.Runtime.Serialization.SerializationInfo** and **System.Runtime.Serialization.StreamingContext** classes.

This constructor implements the **System.Runtime.Serialization.ISerializable** interface for the **System.Net.WebProxy** class. A **System.Runtime.Serialization.SerializationInfo** containing the information required to serialize the new **System.Net.WebProxy** instance. A **System.Runtime.Serialization.StreamingContext** containing the source and destination of the serialized stream associated with the new **System.Net.WebProxy**.

WebProxy

Example Syntax:

ToString

```

25 [C#] public WebProxy(string Address, bool BypassOnLocal);

```

1 [C++] public: WebProxy(String* Address, bool BypassOnLocal);

2 [VB] Public Sub New(ByVal Address As String, ByVal BypassOnLocal As
3 Boolean)

4 [JScript] public function WebProxy(Address : String, BypassOnLocal : Boolean);

6 *Description*

7 Initializes a new instance of the **System.Net.WebProxy** class with the
8 specified URI and bypass setting.

9 The **System.Net.WebProxy** instance is initialized with the
10 **System.Net.WebProxy.Address** property set to a **System.Uri** instance containing
11 *Address* and the **System.Net.WebProxy.BypassProxyOnLocal** property set to
12 *BypassOnLocal* . The URI of the proxy server. **true** to bypass the proxy for local
13 addresses; otherwise, **false**.

14 WebProxy

15 *Example Syntax:*

16 ToString

17
18 [C#] public WebProxy(string Host, int Port);

19 [C++] public: WebProxy(String* Host, int Port);

20 [VB] Public Sub New(ByVal Host As String, ByVal Port As Integer)

21 [JScript] public function WebProxy(Host : String, Port : int);

22 23 *Description*

24 Initializes a new instance of the **System.Net.WebProxy** class with the
25 specified host and port number.

The **System.Net.WebProxy** instance is initialized with the **System.Net.WebProxy.Address** property set to a **System.Uri** instance of the form `http:// Host : Port` . The name of the proxy host. The port number on *Host* to use.

WebProxy

Example Syntax:

ToString

[C#] public WebProxy(Uri Address, bool BypassOnLocal);

[C++] public: WebProxy(Uri* Address, bool BypassOnLocal);

[VB] Public Sub New(ByVal Address As Uri, ByVal BypassOnLocal As Boolean)

[JScript] public function WebProxy(Address : Uri, BypassOnLocal : Boolean);

Description

Initializes a new instance of the **System.Net.WebProxy** class with the **System.Uri** and bypass setting.

The **System.Net.WebProxy** instance is initialized with the **System.Net.WebProxy.Address** property set to *Address* and with the **System.Net.WebProxy.BypassProxyOnLocal** property set to *BypassOnLocal* . A **System.Uri** containing the address of the proxy server. **true** to bypass the proxy for local addresses; otherwise, **false**.

WebProxy

Example Syntax:

ToString

```

1 [C#] public WebProxy(string Address, bool BypassOnLocal, string[] BypassList);
2
3 [C++] public: WebProxy(String* Address, bool BypassOnLocal, String*
4 BypassList __gc[]);
5
6 [VB] Public Sub New(ByVal Address As String, ByVal BypassOnLocal As
7 Boolean, ByVal BypassList() As String)
8
9 [JScript] public function WebProxy(Address : String, BypassOnLocal : Boolean,
10 BypassList : String[]);
11
12

```

Description

Initializes a new instance of the **System.Net.WebProxy** class with the specified URI, bypass setting, and list of URIs to bypass.

The **System.Net.WebProxy** instance is initialized with the **System.Net.WebProxy.Address** property set to a **System.Uri** instance containing *Address* , the **System.Net.WebProxy.BypassProxyOnLocal** property set to *BypassOnLocal* , and the **System.Net.WebProxy.BypassList** property set to *BypassList* . The URI of the proxy server. **true** to bypass the proxy for local addresses; otherwise, **false**. An array of regular expression strings containing the URIs of the servers to bypass.

WebProxy

Example Syntax:

ToString

```

23
24 [C#] public WebProxy(Uri Address, bool BypassOnLocal, string[] BypassList);
25 [C++] public: WebProxy(Uri* Address, bool BypassOnLocal, String* BypassList

```

```

1  __gc[]);
2  [VB] Public Sub New(ByVal Address As Uri, ByVal BypassOnLocal As Boolean,
3  ByVal BypassList() As String)
4  [JScript] public function WebProxy(Address : Uri, BypassOnLocal : Boolean,
5  BypassList : String[]);

```

Description

Initializes a new instance of the **System.Net.WebProxy** class with the specified **System.Uri** , bypass setting, and list of URIs to bypass.

The **System.Net.WebProxy** instance is initialized with the **System.Net.WebProxy.Address** property set to *Address* , the **System.Net.WebProxy.BypassProxyOnLocal** property set to *BypassOnLocal* , and the **System.Net.WebProxy.BypassList** property set to *BypassList* . A **System.Uri** containing the address of the proxy server. **true** to bypass the proxy for local addresses; otherwise, **false**. An array of regular expression strings containing the URIs of the servers to bypass.

WebProxy

Example Syntax:

ToString

```

21 [C#] public WebProxy(string Address, bool BypassOnLocal, string[] BypassList,
22 ICredentials Credentials);
23 [C++] public: WebProxy(String* Address, bool BypassOnLocal, String*
24 BypassList __gc[], ICredentials* Credentials);
25 [VB] Public Sub New(ByVal Address As String, ByVal BypassOnLocal As

```

Boolean, ByVal BypassList() As String, ByVal Credentials As ICredentials)
[JScript] public function WebProxy(Address : String, BypassOnLocal : Boolean,
BypassList : String[], Credentials : ICredentials);

Description

Initializes a new instance of the **System.Net.WebProxy** class with the specified URI, bypass setting, list of URIs to bypass, and credentials.

The **System.Net.WebProxy** instance is initialized with the **System.Net.WebProxy.Address** property set to a **System.Uri** instance containing *Address* , the **System.Net.WebProxy.BypassProxyOnLocal** property set to *BypassOnLocal* , the **System.Net.WebProxy.BypassList** property set to *BypassList* , and the **System.Net.WebProxy.Credentials** property set to *Credentials* . The URI of the proxy server. **true** to bypass the proxy for local addresses; otherwise, **false**. An array of regular expression strings containing the URIs of the servers to bypass. An **System.Net.ICredentials** to submit to the proxy server for authentication.

WebProxy

Example Syntax:

ToString

[C#] public WebProxy(Uri Address, bool BypassOnLocal, string[] BypassList,
ICredentials Credentials);
[C++] public: WebProxy(Uri* Address, bool BypassOnLocal, String* BypassList
__gc[], ICredentials* Credentials);
[VB] Public Sub New(ByVal Address As Uri, ByVal BypassOnLocal As Boolean,

1 ByVal BypassList() As String, ByVal Credentials As ICredentials)

2 [JScript] public function WebProxy(Address : Uri, BypassOnLocal : Boolean,
3 BypassList : String[], Credentials : ICredentials);

5 *Description*

6 Initializes a new instance of the **System.Net.WebProxy** class with the
7 specified **System.Uri** , bypass setting, list of URIs to bypass, and credentials.

8 The **System.Net.WebProxy** instance is initialized with the
9 **System.Net.WebProxy.Address** property set to *Address* , the
10 **System.Net.WebProxy.BypassProxyOnLocal** property set to *BypassOnLocal* ,
11 the **System.Net.WebProxy.BypassList** property set to *BypassList* , and the
12 **System.Net.WebProxy.Credentials** property set to *Credentials* A **System.Uri**
13 containing the address of the proxy server. **true** to bypass the proxy for local
14 addresses; otherwise, **false**. An array of regular expression strings containing the
15 URIs of the servers to bypass. An **System.Net.ICredentials** to submit to the proxy
16 server for authentication.

17 Address

18 ToString

19
20 [C#] public Uri Address {get; set;}

21 [C++] public: __property Uri* get_Address();public: __property void
22 set_Address(Uri*);

23 [VB] Public Property Address As Uri

24 [JScript] public function get Address() : Uri;public function set Address(Uri);

1
2 *Description*

3 Gets or sets the address of the proxy server.

4 The **System.Net.WebProxy.Address** property contains the address of the
5 proxy server. When **System.Net.WebProxy.Address** is **null** , all requests bypass
6 the proxy and connect directly to the destination host.

7 BypassArrayList

8 ToString

9
10 [C#] public ArrayList BypassArrayList {get;}

11 [C++] public: __property ArrayList* get_BypassArrayList();

12 [VB] Public ReadOnly Property BypassArrayList As ArrayList

13 [JScript] public function get BypassArrayList() : ArrayList;

14
15 *Description*

16 Gets a list of addresses that do not use the proxy server.

17 The **System.Net.WebProxy.BypassList** property contains an array of URI
18 strings that a **System.Net.WebRequest** instance accesses directly instead of
19 through the proxy server.

20 BypassList

21 ToString

22
23 [C#] public string[] BypassList {get; set;}

24 [C++] public: __property String* get_BypassList();public: __property void

25 set_BypassList(String* __gc[]);

1 [VB] Public Property BypassList As String ()

2 [JScript] public function get BypassList() : String[];public function set

3 BypassList(String[]);

4
5 *Description*

6 Gets or sets an array of addresses that do not use the proxy server.

7 The **System.Net.WebProxy.BypassList** property contains an array of
8 regular expressions that describe URIs that a **System.Net.WebRequest** instance
9 accesses directly instead of through the proxy server.

10 BypassProxyOnLocal

11 ToString

12
13 [C#] public bool BypassProxyOnLocal {get; set;}

14 [C++] public: __property bool get _BypassProxyOnLocal();public: __property

15 void set _BypassProxyOnLocal(bool);

16 [VB] Public Property BypassProxyOnLocal As Boolean

17 [JScript] public function get BypassProxyOnLocal() : Boolean;public function set

18 BypassProxyOnLocal(Boolean);

19
20 *Description*

21 Gets or sets a value indicating whether to bypass the proxy server for local
22 addresses.

23 The setting of the **System.Net.WebProxy.BypassProxyOnLocal** property
24 determines whether **System.Net.WebRequest** instances use the proxy server
25 when accessing local Internet resources.

Credentials

ToString

[C#] public ICredentials Credentials {get; set;}

[C++] public: __property ICredentials* get_Credentials();public: __property void
set_Credentials(ICredentials*);

[VB] Public Property Credentials As ICredentials

[JScript] public function get Credentials() : ICredentials;public function set
Credentials(ICredentials);

Description

Gets or sets the credentials to submit to the proxy server for authentication.

The **System.Net.WebProxy.Credentials** property contains the
authentication credentials to send to the proxy server in response to an HTTP 407
(proxy authorization) status code.

GetDefaultProxy

[C#] public static WebProxy GetDefaultProxy();

[C++] public: static WebProxy* GetDefaultProxy();

[VB] Public Shared Function GetDefaultProxy() As WebProxy

[JScript] public static function GetDefaultProxy() : WebProxy;

Description

1 Reads the Internet Explorer nondynamic proxy settings.

2 *Return Value:* A **System.Net.WebProxy** instance containing the nondynamic
3 proxy settings from Internet Explorer 5.5.

4 The **System.Net.WebProxy.GetDefaultProxy** method reads the
5 nondynamic proxy settings stored by Internet Explorer 5.5 and creates a
6 **System.Net.WebProxy** instance with those settings.

7 GetProxy

8
9 [C#] public Uri GetProxy(Uri destination);

10 [C++] public: __sealed Uri* GetProxy(Uri* destination);

11 [VB] NotOverridable Public Function GetProxy(ByVal destination As Uri) As Uri

12 [JScript] public function GetProxy(destination : Uri) : Uri;

13 14 *Description*

15 Returns the proxied URI for a request.

16 *Return Value:* The **System.Uri** of the Internet resource, if the resource is on the
17 bypass list; otherwise, the **System.Uri** of the proxy.

18 The **System.Net.WebProxy.GetProxy(System.Uri)** method returns the
19 URI that the **System.Net.WebRequest** uses to access the Internet resource. The
20 **System.Uri** of the requested Internet resource.

21 IsBypassed

22
23 [C#] public bool IsBypassed(Uri host);

24 [C++] public: __sealed bool IsBypassed(Uri* host);

25 [VB] NotOverridable Public Function IsBypassed(ByVal host As Uri) As Boolean

1 [JScript] public function IsBypassed(host : Uri) : Boolean;

3 *Description*

4 Indicates whether to use the proxy server for the specified host.

5 *Return Value:* **true** if the proxy server should not be used for *host* ; otherwise,
6 **false** .

7 The **System.Net.WebProxy.IsBypassed(System.Uri)** method is used to
8 determine whether to bypass the proxy server when accessing an Internet resource.

9 The **System.Uri** of the host to check for proxy use.

10 **ISerializable.GetObjectData**

11
12 [C#] void ISerializable.GetObjectData(SerializationInfo serializationInfo,
13 StreamingContext streamingContext);

14 [C++] void ISerializable::GetObjectData(SerializationInfo* serializationInfo,
15 StreamingContext streamingContext);

16 [VB] Sub GetObjectData(ByVal serializationInfo As SerializationInfo, ByVal
17 streamingContext As StreamingContext) Implements ISerializable.GetObjectData

18 [JScript] function ISerializable.GetObjectData(serializationInfo : SerializationInfo,
19 streamingContext : StreamingContext);

20 **WebRequest** class (System.Net)

21 **ToString**

24 *Description*

Makes a request to a Uniform Resource Identifier (URI). This is an **abstract** class.

System.Net.WebRequest is the **abstract** base class for the .NET Framework's request/response model for accessing data from the Internet. An application that uses the request/response model can request data from the Internet in a protocol-agnostic manner, in which the application works with instances of the **System.Net.WebRequest** class while protocol-specific descendant classes carry out the details of the request.

WebRequest

Example Syntax:

ToString

[C#] protected WebRequest();

[C++] protected: WebRequest();

[VB] Protected Sub New()

[JScript] protected function WebRequest(); Initializes a new instance of the **System.Net.WebRequest** class.

Description

Initializes a new instance of the **System.Net.WebRequest** class.

Use the **System.Net.WebRequest.Create(System.Uri,System.Boolean)** method to initialize new **System.Net.WebRequest** instances. Do not use the constructor.

WebRequest

Example Syntax:

ToString

[C#] protected WebRequest(SerializationInfo serializationInfo, StreamingContext streamingContext);

[C++] protected: WebRequest(SerializationInfo* serializationInfo, StreamingContext streamingContext);

[VB] Protected Sub New(ByVal serializationInfo As SerializationInfo, ByVal streamingContext As StreamingContext)

[JScript] protected function WebRequest(serializationInfo : SerializationInfo, streamingContext : StreamingContext);

Description

Initializes a new instance of the **System.Net.WebRequest** class from the specified instances of the **System.Runtime.Serialization.SerializationInfo** and **System.Runtime.Serialization.StreamingContext** classes.

When implemented by a descendant class, this constructor implements the **System.Runtime.Serialization.ISerializable** interface for the **System.Net.WebRequest** descendant. A **System.Runtime.Serialization.SerializationInfo** that contains the information required to serialize the new **System.Net.WebRequest** instance. A **System.Runtime.Serialization.StreamingContext** that indicates the source of the serialized stream associated with the new **System.Net.WebRequest** instance.

ConnectionGroupName

ToString


```

1 [C#] public virtual string ConnectionGroupName {get; set;}
2
3 [C++] public: __property virtual String* get_ConnectionGroupName();public:
4 __property virtual void set_ConnectionGroupName(String*);
5
6 [VB] Overridable Public Property ConnectionGroupName As String
7
8 [JScript] public function get ConnectionGroupName() : String;public function set
9 ConnectionGroupName(String);

```

Description

When overridden in a descendant class, gets or sets the name of the connection group for the request.

The **System.Net.WebRequest.ConnectionGroupName** property associates specific requests within an application to one or more connection pools.

ContentLength

ToString

```

17 [C#] public virtual long ContentLength {get; set;}
18
19 [C++] public: __property virtual __int64 get_ContentLength();public: __property
20 virtual void set_ContentLength(__int64);
21
22 [VB] Overridable Public Property ContentLength As Long
23
24 [JScript] public function get ContentLength() : long;public function set
25 ContentLength(long);

```

Description

When overridden in a descendant class, gets or sets the content length of the request data being sent.

The **System.Net.WebRequest.ContentLength** property contains the number of bytes of data sent to the Internet resource by the **System.Net.WebRequest** instance.

ContentType

ToString

[C#] public virtual string ContentType {get; set;}

[C++] public: __property virtual String* get_ContentType();public: __property virtual void set_ContentType(String*);

[VB] Overridable Public Property ContentType As String

[JScript] public function get ContentType() : String;public function set ContentType(String);

Description

When overridden in a descendant class, gets or sets the content type of the request data being sent.

The **System.Net.WebRequest.ContentType** property contains the media type of the request. This is typically the MIME encoding of the content.

Credentials

ToString

[C#] public virtual ICredentials Credentials {get; set;}

[C++] public: __property virtual ICredentials* get_Credentials();public:

1 __property virtual void set_Credentials(ICredentials*);

2 [VB] Overridable Public Property Credentials As ICredentials

3 [JScript] public function get Credentials() : ICredentials;public function set

4 Credentials(ICredentials);

5
6 *Description*

7 When overridden in a descendant class, gets or sets the network credentials
8 used for authenticating the request with the Internet resource.

9 The **System.Net.WebRequest.Credentials** property contains the
10 authentication credentials required to access the Internet resource.

11 Headers

12 ToString

13
14 [C#] public virtual WebHeaderCollection Headers {get; set;}

15 [C++] public: __property virtual WebHeaderCollection* get_Headers();public:

16 __property virtual void set_Headers(WebHeaderCollection*);

17 [VB] Overridable Public Property Headers As WebHeaderCollection

18 [JScript] public function get Headers() : WebHeaderCollection;public function set

19 Headers(WebHeaderCollection);

20
21 *Description*

22 When overridden in a descendant class, gets or sets the collection of header
23 name/value pairs associated with the request.

The **System.Net.WebRequest.Headers** property contains a **System.Net.WebHeaderCollection** instance containing the header information to send to the Internet resource.

Method

ToString

[C#] public virtual string Method {get; set;}

[C++] public: __property virtual String* get_Method();public: __property virtual void set_Method(String*);

[VB] Overridable Public Property Method As String

[JScript] public function get Method() : String;public function set Method(String);

Description

When overridden in a descendant class, gets or sets the protocol method to use in this request.

When overridden in a descendant class, the **System.Net.WebRequest.Method** property contains the request method to use in this request.

PreAuthenticate

ToString

[C#] public virtual bool PreAuthenticate {get; set;}

[C++] public: __property virtual bool get_PreAuthenticate();public: __property virtual void set_PreAuthenticate(bool);

[VB] Overridable Public Property PreAuthenticate As Boolean

[JScript] public function get PreAuthenticate() : Boolean; public function set
PreAuthenticate(Boolean);

Description

When overridden in a descendant class, indicates whether to
preauthenticate the request.

The **System.Net.WebRequest.PreAuthenticate** property indicates
whether to send authentication information with the initial request. When
System.Net.WebRequest.PreAuthenticate is **false**, the
System.Net.WebRequest waits for an authentication challenge before sending
authentication information.

Proxy

ToString

[C#] public virtual IWebProxy Proxy {get; set;}

[C++] public: __property virtual IWebProxy* get_Proxy(); public: __property
virtual void set_Proxy(IWebProxy*);

[VB] Overridable Public Property Proxy As IWebProxy

[JScript] public function get Proxy() : IWebProxy; public function set
Proxy(IWebProxy);

Description

When overridden in a descendant class, gets or sets the network proxy to
use to access this Internet resource.

1 The **System.Net.WebRequest.Proxy** property identifies the network proxy
2 that the request uses to access the Internet resource. The request is made through
3 the proxy server rather than directly to the Internet resource.

4 RequestUri

5 ToString

6
7 [C#] public virtual Uri RequestUri {get;}

8 [C++] public: __property virtual Uri* get_RequestUri();

9 [VB] Overridable Public ReadOnly Property RequestUri As Uri

10 [JScript] public function get RequestUri() : Uri;

11
12 *Description*

13 When overridden in a descendant class, gets the URI of the Internet
14 resource associated with the request.

15 When overridden in a descendant class, the
16 **System.Net.WebRequest.RequestUri** property contains the **System.Uri** instance
17 that **System.Net.WebRequest.Create(System.Uri, System.Boolean)** method uses
18 to create the request.

19 Timeout

20 ToString

21
22 [C#] public virtual int Timeout {get; set;}

23 [C++] public: __property virtual int get_Timeout();public: __property virtual void
24 set_Timeout(int);

25 [VB] Overridable Public Property Timeout As Integer

1 [JScript] public function get Timeout() : int; public function set Timeout(int);

3 *Description*

4 Gets or sets the length of time before the request times out.

5 The **System.Net.WebRequest.Timeout** property indicates the length of
6 time, in milliseconds, until the request times out and throws a

7 **System.Net.WebException**. The **System.Net.WebRequest.Timeout** property
8 affects only synchronous requests made with the

9 **System.Net.WebRequest.GetResponse** method. To time out asynchronous
10 requests, use the **System.Net.WebRequest.Abort** method.

11 **Abort**

13 [C#] public virtual void Abort();

14 [C++] public: virtual void Abort();

15 [VB] Overridable Public Sub Abort()

16 [JScript] public function Abort();

18 *Description*

19 Cancels an asynchronous request to an Internet resource.

20 The **System.Net.WebRequest.Abort** method cancels asynchronous
21 requests to Internet resources started with the
22 **System.Net.WebRequest.BeginGetResponse(System.AsyncCallback, System.O**
23 **bject)** method.

24 **BeginGetRequestStream**

```

1
2 [C#] public virtual IAsyncResult BeginGetRequestStream(AsyncCallback
3 callback, object state);
4 [C++] public: virtual IAsyncResult* BeginGetRequestStream(AsyncCallback*
5 callback, Object* state);
6 [VB] Overridable Public Function BeginGetRequestStream(ByVal callback As
7 AsyncCallback, ByVal state As Object) As IAsyncResult
8 [JScript] public function BeginGetRequestStream(callback : AsyncCallback, state
9 : Object) : IAsyncResult;
10

```

Description

When overridden in a descendant class, provides an asynchronous version of the **System.Net.WebRequest.GetRequestStream** method.

Return Value: An **System.IAsyncResult** that references the asynchronous request.

The

System.Net.WebRequest.BeginGetRequestStream(System.AsyncCallback, System.Object) method starts an asynchronous request for a stream used to send data to an Internet resource. The callback method that implements the **System.AsyncCallback** delegate uses the **System.Net.WebRequest.EndGetRequestStream(System.IAsyncResult)** method to return the request stream. The **System.AsyncCallback** delegate. An object containing state information for this asynchronous request.

BeginGetResponse

```

23
24
25 [C#] public virtual IAsyncResult BeginGetResponse(AsyncCallback callback,

```


object state);

[C++] public: virtual IAsyncResult* BeginGetResponse(AsyncCallback*
callback, Object* state);

[VB] Overridable Public Function BeginGetResponse(ByVal callback As
AsyncCallback, ByVal state As Object) As IAsyncResult

[JScript] public function BeginGetResponse(callback : AsyncCallback, state :
Object) : IAsyncResult;

Description

When overridden in a descendant class, begins an asynchronous request for
an Internet resource.

Return Value: An **System.IAsyncResult** that references the asynchronous request.

The
**System.Net.WebRequest.BeginGetResponse(System.AsyncCallback, System.O
bject)** method starts an asynchronous request for a response. The callback method
that implements the **System.AsyncCallback** delegate uses the
System.Net.WebRequest.EndGetResponse(System.IAsyncResult) method to
return the **System.Net.WebResponse** from the Internet resource. The
System.AsyncCallback delegate. An object containing state information for this
asynchronous request.

Create

[C#] public static WebRequest Create(string requestUriString);

[C++] public: static WebRequest* Create(String* requestUriString);

[VB] Public Shared Function Create(ByVal requestUriString As String) As

WebRequest

[JScript] public static function Create(requestUriString : String) : WebRequest;

Initializes a new **System.Net.WebRequest** .

Description

Initializes a new **System.Net.WebRequest** instance for the specified URI scheme.

Return Value: A **System.Net.WebRequest** descendant for the specific URI scheme.

The **System.Net.WebRequest.Create(System.Uri,System.Boolean)** method returns a descendant of the **System.Net.WebRequest** class determined at run time by the scheme of the URI in *requestUriString* . For example, when a URI beginning with *http://* is passed in *requestUriString* , an **System.Net.HttpWebRequest** instance is returned by **System.Net.WebRequest.Create(System.Uri,System.Boolean)** . If a URI beginning with *file://* is passed instead, the **System.Net.WebRequest.Create(System.Uri,System.Boolean)** method will return a **System.Net.FileWebRequest** instance. The URI that identifies the Internet resource.

Create

[C#] public static WebRequest Create(Uri requestUri);

[C++] public: static WebRequest* Create(Uri* requestUri);

[VB] Public Shared Function Create(ByVal requestUri As Uri) As WebRequest

[JScript] public static function Create(requestUri : Uri) : WebRequest;

Description

Initializes a new **System.Net.WebRequest** instance for the specified URI scheme.

Return Value: A **System.Net.WebRequest** descendant for the specified URI scheme.

The **System.Net.WebRequest.Create(System.Uri, System.Boolean)** method returns a descendant of the **System.Net.WebRequest** class determined at run time by the scheme of the URI in *requestUri*. For example, when a URI beginning with `http://` is passed in *requestUri*, an **System.Net.HttpWebRequest** instance is returned by **System.Net.WebRequest.Create(System.Uri, System.Boolean)**. If a URI beginning with `file://` is passed instead, the **System.Net.WebRequest.Create(System.Uri, System.Boolean)** method will return a **System.Net.FileWebRequest** instance. A **System.Uri** containing the URI of the requested resource.

CreateDefault

[C#] public static WebRequest CreateDefault(Uri requestUri);

[C++] public: static WebRequest* CreateDefault(Uri* requestUri);

[VB] Public Shared Function CreateDefault(ByVal requestUri As Uri) As WebRequest

[JScript] public static function CreateDefault(requestUri : Uri) : WebRequest;

Description

1 Initializes a new **System.Net.WebRequest** instance for the specified URI
2 scheme.

3 *Return Value:* A **System.Net.WebRequest** descendant for the specified URI
4 scheme.

5 The **System.Net.WebRequest.CreateDefault(System.Uri)** method returns
6 a **System.Net.WebRequest** descendant instance based on only the scheme portion
7 of a URI. A **System.Uri** containing the URI of the requested resource.

8 **EndGetRequestStream**

9
10 [C#] public virtual Stream EndGetRequestStream(IAsyncResult asyncResult);

11 [C++] public: virtual Stream* EndGetRequestStream(IAsyncResult*
12 asyncResult);

13 [VB] Overridable Public Function EndGetRequestStream(ByVal asyncResult As
14 IAsyncResult) As Stream

15 [JScript] public function EndGetRequestStream(asyncResult : IAsyncResult) :
16 Stream;

17
18 *Description*

19 When overridden in a descendant class, returns a **System.IO.Stream** for
20 writing data to the Internet resource.

21 *Return Value:* A **System.IO.Stream** to write data to.

22 The
23 **System.Net.WebRequest.EndGetRequestStream(System.IAsyncResult)**
24 method completes an asynchronous stream request that was started by the
25 **System.Net.WebRequest.BeginGetRequestStream(System.AsyncCallback, Sys**

tem.Object) method. An **System.IAsyncResult** that references a pending request for a stream.

EndGetResponse

[C#] public virtual WebResponse EndGetResponse(IAsyncResult asyncResult);

[C++] public: virtual WebResponse* EndGetResponse(IAsyncResult* asyncResult);

[VB] Overridable Public Function EndGetResponse(ByVal asyncResult As IAsyncResult) As WebResponse

[JScript] public function EndGetResponse(asyncResult : IAsyncResult) : WebResponse;

Description

When overridden in a descendant class, returns a **System.Net.WebResponse** .

Return Value: A **System.Net.WebResponse** that contains a response to the Internet request.

The **System.Net.WebRequest.EndGetResponse(System.IAsyncResult)** method completes an asynchronous request for an Internet resource that was started with the **System.Net.WebRequest.BeginGetResponse(System.AsyncCallback, System.Object)** method. An **System.IAsyncResult** that references a pending request for a response.

GetRequestStream

1
2 [C#] public virtual Stream GetRequestStream();

3 [C++] public: virtual Stream* GetRequestStream();

4 [VB] Overridable Public Function GetRequestStream() As Stream

5 [JScript] public function GetRequestStream() : Stream;

6
7 *Description*

8 When overridden in a descendant class, returns a **System.IO.Stream** for
9 writing data to the Internet resource.

10 *Return Value:* A **System.IO.Stream** for writing data to the Internet resource.

11 The **System.Net.WebRequest.GetRequestStream** method initiates a
12 request to send data to the Internet resource and returns a **System.IO.Stream**
13 instance for sending data to the Internet resource.

14 **GetResponse**

15
16 [C#] public virtual WebResponse GetResponse();

17 [C++] public: virtual WebResponse* GetResponse();

18 [VB] Overridable Public Function GetResponse() As WebResponse

19 [JScript] public function GetResponse() : WebResponse;

20
21 *Description*

22 When overridden in a descendant class, returns a response to an Internet
23 request.

24 *Return Value:* A **System.Net.WebResponse** containing the response to the
25 Internet request.

1 The **System.Net.WebRequest.GetResponse** method sends a request to an
2 Internet resource and returns a **System.Net.WebResponse** instance. If the request
3 has already been initiated by a call to
4 **System.Net.WebRequest.GetRequestStream** , the
5 **System.Net.WebRequest.GetResponse** method completes the request and returns
6 any response.

7 RegisterPrefix

8
9 [C#] public static bool RegisterPrefix(string prefix, IWebRequestCreate creator);

10 [C++] public: static bool RegisterPrefix(String* prefix, IWebRequestCreate*
11 creator);

12 [VB] Public Shared Function RegisterPrefix(ByVal prefix As String, ByVal
13 creator As IWebRequestCreate) As Boolean

14 [JScript] public static function RegisterPrefix(prefix : String, creator :
15 IWebRequestCreate) : Boolean;

16 17 Description

18 Registers a **System.Net.WebRequest** descendant for the specified URI.

19 *Return Value:* **true** if registration is successful; otherwise, **false** .

20 The

21 **System.Net.WebRequest.RegisterPrefix(System.String,System.Net.IWebRequ**
22 **estCreate)** method registers **System.Net.WebRequest** descendants to service
23 requests. The URI prefix that the **System.Net.WebRequest** descendant services.
24 The create method that the **System.Net.WebRequest** calls to create the
25 **System.Net.WebRequest** descendant.

ISerializable.GetObjectData

[C#] void ISerializable.GetObjectData(SerializationInfo serializationInfo,
StreamingContext streamingContext);
[C++] void ISerializable::GetObjectData(SerializationInfo* serializationInfo,
StreamingContext streamingContext);
[VB] Sub GetObjectData(ByVal serializationInfo As SerializationInfo, ByVal
streamingContext As StreamingContext) Implements ISerializable.GetObjectData
[JScript] function ISerializable.GetObjectData(serializationInfo : SerializationInfo,
streamingContext : StreamingContext);

WebResponse class (System.Net)

ToString

Description

Provides a response from a Uniform Resource Identifier (URI). This is an **abstract** class.

The **System.Net.WebResponse** class is the **abstract** base class from which protocol-specific response classes are derived. Applications can use the **System.Net.WebResponse** class to handle responses in a protocol-agnostic manner. In that case, the application works with instances of the **System.Net.WebResponse** class while the details of the request are carried out by protocol-specific descendant classes.

WebResponse

Example Syntax:

ToString

[C#] protected WebResponse();

[C++] protected: WebResponse();

[VB] Protected Sub New()

[JScript] protected function WebResponse(); Initializes a new instance of the

System.Net.WebResponse class.

Description

Initializes a new instance of the **System.Net.WebResponse** class.

Applications do not call the **System.Net.WebResponse** constructor directly, use the **System.Net.WebRequest.GetResponse** method on a **System.Net.WebRequest** instance.

WebResponse

Example Syntax:

ToString

[C#] protected WebResponse(SerializationInfo serializationInfo,

StreamingContext streamingContext);

[C++] protected: WebResponse(SerializationInfo* serializationInfo,

StreamingContext streamingContext);

[VB] Protected Sub New(ByVal serializationInfo As SerializationInfo, ByVal
streamingContext As StreamingContext)

[JScript] protected function WebResponse(serializationInfo : SerializationInfo,
streamingContext : StreamingContext);

Description

Initializes a new instance of the **System.Net.WebResponse** class from the specified instances of the **System.Runtime.Serialization.SerializationInfo** and **System.Runtime.Serialization.StreamingContext** classes.

When implemented by a descendant class, this constructor implements the **System.Runtime.Serialization.ISerializable** interface for the **System.Net.WebResponse** descendant. An instance of the **System.Runtime.Serialization.SerializationInfo** class containing the information required to serialize the new **System.Net.WebRequest** instance. An instance of the **System.Runtime.Serialization.StreamingContext** class indicating the source of the serialized stream associated with the new **System.Net.WebRequest** instance.

ContentLength

ToString

```
[C#] public virtual long ContentLength {get; set;}
```

```
[C++] public: __property virtual __int64 get_ContentLength();public: __property  
virtual void set_ContentLength(__int64);
```

```
[VB] Overridable Public Property ContentLength As Long
```

```
[JScript] public function get ContentLength() : long;public function set  
ContentLength(long);
```

Description

When overridden in a descendant class, gets or sets the content length of data being received.

The **System.Net.WebResponse.ContentLength** property contains the length, in bytes, of the response from the Internet resource. For request methods that contain header information, the **System.Net.WebResponse.ContentLength** does not include the length of the header information.

ContentType

ToString

```
[C#] public virtual string ContentType {get; set;}
```

```
[C++] public: __property virtual String* get_ContentType();public: __property  
virtual void set_ContentType(String*);
```

```
[VB] Overridable Public Property ContentType As String
```

```
[JScript] public function get ContentType() : String;public function set  
ContentType(String);
```

Description

When overridden in a derived class, gets or sets the content type of the data being received.

The **System.Net.WebResponse.ContentType** property contains the MIME content type of the response from the Internet resource, if known.

Headers

ToString

```
[C#] public virtual WebHeaderCollection Headers {get;}
```

1 [C++] public: __property virtual WebHeaderCollection* get_Headers();

2 [VB] Overridable Public ReadOnly Property Headers As WebHeaderCollection

3 [JScript] public function get Headers() : WebHeaderCollection;

4
5 *Description*

6 When overridden in a derived class, gets a collection of header name-value
7 pairs associated with this request.

8 The **System.Net.WebResponse.Headers** property contains the name-value
9 header pairs returned in the response.

10 ResponseUri

11 ToString

12
13 [C#] public virtual Uri ResponseUri {get;}

14 [C++] public: __property virtual Uri* get_ResponseUri();

15 [VB] Overridable Public ReadOnly Property ResponseUri As Uri

16 [JScript] public function get ResponseUri() : Uri;

17
18 *Description*

19 When overridden in a derived class, gets the URI of the Internet resource
20 that actually responded to the request.

21 The **System.Net.WebResponse.ResponseUri** property contains the URI of
22 the Internet resource that actually provided the response data. This resource may
23 not be the originally requested URI if the underlying protocol allows redirection of
24 the request.

25 Close

```

1  [C#] public virtual void Close();
2
3  [C++] public: virtual void Close();
4
5  [VB] Overridable Public Sub Close()
6
7  [JScript] public function Close();

```

Description

When overridden by a descendent class, closes the response stream.

The **System.Net.WebResponse.Close** method cleans up the resources used by a **System.Net.WebResponse** and closes the underlying stream by calling the **System.IO.Stream.Close** method.

GetResponseStream

```

12
13
14 [C#] public virtual Stream GetResponseStream();
15
16 [C++] public: virtual Stream* GetResponseStream();
17
18 [VB] Overridable Public Function GetResponseStream() As Stream
19
20 [JScript] public function GetResponseStream() : Stream;

```

Description

When overridden in a descendant class, returns the data stream from the Internet resource.

Return Value: An instance of the **System.IO.Stream** class for reading data from the Internet resource.

The **System.Net.WebResponse.GetResponseStream** method returns the data stream from the Internet resource.

1 IDisposable.Dispose

3 [C#] void IDisposable.Dispose();

4 [C++] void IDisposable::Dispose();

5 [VB] Sub Dispose() Implements IDisposable.Dispose

6 [JScript] function IDisposable.Dispose();

7 ISerializable.GetObjectData

9 [C#] void ISeria

11 **System.Net.Sockets**

12 The namespace provides a managed implementation of the Windows
13 Sockets interface for developers that need to tightly control access to the network.
14 Developers familiar with the Winsock API should have no problems developing
15 applications using the class.

17 *Description*

18 The **System.Net.Sockets** namespace provides a managed implementation
19 of the Windows Sockets interface for developers that need to tightly control access
20 to the network. Developers familiar with the Winsock API should have no
21 problems developing applications using the **System.Net.Sockets.Socket** class.

22 AddressFamily enumeration (System.Net.Sockets)

25 *Description*

1 Specifies the addressing scheme that an instance of the
2 **System.Net.Sockets.Socket** class can use.

3 An **System.Net.Sockets.AddressFamily** member specifies the addressing
4 scheme that a **System.Net.Sockets.Socket** instance uses to resolve an address. For
5 example, **System.Net.Sockets.AddressFamily.InterNetwork** indicates that an IP
6 version 4 address is expected when a **System.Net.Sockets.Socket** connects to an
7 end point.

8
9 [C#] public const AddressFamily AppleTalk;

10 [C++] public: const AddressFamily AppleTalk;

11 [VB] Public Const AppleTalk As AddressFamily

12 [JScript] public var AppleTalk : AddressFamily;

13
14 *Description*

15 AppleTalk address.

16
17 [C#] public const AddressFamily Atm;

18 [C++] public: const AddressFamily Atm;

19 [VB] Public Const Atm As AddressFamily

20 [JScript] public var Atm : AddressFamily;

21
22 *Description*

23 Native ATM services address.

24
25 [C#] public const AddressFamily Banyan;

1 [C++] public: const AddressFamily Banyan;
2 [VB] Public Const Banyan As AddressFamily
3 [JScript] public var Banyan : AddressFamily;
4

5 *Description*

6 Banyan address.
7

8 [C#] public const AddressFamily Ccitt;
9 [C++] public: const AddressFamily Ccitt;
10 [VB] Public Const Ccitt As AddressFamily
11 [JScript] public var Ccitt : AddressFamily;
12

13 *Description*

14 Addresses for CCITT protocols, such as X.25.
15

16 [C#] public const AddressFamily Chaos;
17 [C++] public: const AddressFamily Chaos;
18 [VB] Public Const Chaos As AddressFamily
19 [JScript] public var Chaos : AddressFamily;
20

21 *Description*

22 Address for MIT CHAOS protocols.
23

24 [C#] public const AddressFamily Cluster;
25 [C++] public: const AddressFamily Cluster;

1 [VB] Public Const Cluster As AddressFamily

2 [JScript] public var Cluster : AddressFamily;

3

4 *Description*

5 Address for Microsoft cluster products.

6

7 [C#] public const AddressFamily DataKit;

8 [C++] public: const AddressFamily DataKit;

9 [VB] Public Const DataKit As AddressFamily

10 [JScript] public var DataKit : AddressFamily;

11

12 *Description*

13 Address for Datakit protocols.

14

15 [C#] public const AddressFamily DataLink;

16 [C++] public: const AddressFamily DataLink;

17 [VB] Public Const DataLink As AddressFamily

18 [JScript] public var DataLink : AddressFamily;

19

20 *Description*

21 Direct data-link interface address.

22

23 [C#] public const AddressFamily DecNet;

24 [C++] public: const AddressFamily DecNet;

25 [VB] Public Const DecNet As AddressFamily

1 [JScript] public var DecNet : AddressFamily;

3 *Description*

4 DECnet address.

6 [C#] public const AddressFamily Ecma;

7 [C++] public: const AddressFamily Ecma;

8 [VB] Public Const Ecma As AddressFamily

9 [JScript] public var Ecma : AddressFamily;

11 *Description*

12 European Computer Manufacturers Association (ECMA) address.

14 [C#] public const AddressFamily FireFox;

15 [C++] public: const AddressFamily FireFox;

16 [VB] Public Const FireFox As AddressFamily

17 [JScript] public var FireFox : AddressFamily;

19 *Description*

20 FireFox address.

22 [C#] public const AddressFamily HyperChannel;

23 [C++] public: const AddressFamily HyperChannel;

24 [VB] Public Const HyperChannel As AddressFamily

25 [JScript] public var HyperChannel : AddressFamily;

1
2 *Description*

3 NSC Hyperchannel address.
4

5 [C#] public const AddressFamily Ieee12844;
6 [C++] public: const AddressFamily Ieee12844;
7 [VB] Public Const Ieee12844 As AddressFamily
8 [JScript] public var Ieee12844 : AddressFamily;
9

10 *Description*

11 IEEE 1284.4 workgroup address.
12

13 [C#] public const AddressFamily ImpLink;
14 [C++] public: const AddressFamily ImpLink;
15 [VB] Public Const ImpLink As AddressFamily
16 [JScript] public var ImpLink : AddressFamily;
17

18 *Description*

19 ARPANET IMP address.
20

21 [C#] public const AddressFamily InterNetwork;
22 [C++] public: const AddressFamily InterNetwork;
23 [VB] Public Const InterNetwork As AddressFamily
24 [JScript] public var InterNetwork : AddressFamily;
25

1
2 *Description*

3 Address for IP version 4.

4
5 [C#] public const AddressFamily InterNetworkV6;

6 [C++] public: const AddressFamily InterNetworkV6;

7 [VB] Public Const InterNetworkV6 As AddressFamily

8 [JScript] public var InterNetworkV6 : AddressFamily;

9
10 *Description*

11 Address for IP version 6.

12
13 [C#] public const AddressFamily Ipx;

14 [C++] public: const AddressFamily Ipx;

15 [VB] Public Const Ipx As AddressFamily

16 [JScript] public var Ipx : AddressFamily;

17
18 *Description*

19 IPX or SPX address.

20
21 [C#] public const AddressFamily Irda;

22 [C++] public: const AddressFamily Irda;

23 [VB] Public Const Irda As AddressFamily

24 [JScript] public var Irda : AddressFamily;

1
2 *Description*

3 IrDA address.
4

5 [C#] public const AddressFamily Iso;

6 [C++] public: const AddressFamily Iso;

7 [VB] Public Const Iso As AddressFamily

8 [JScript] public var Iso : AddressFamily;

9
10 *Description*

11 Address for ISO protocols.
12

13 [C#] public const AddressFamily Lat;

14 [C++] public: const AddressFamily Lat;

15 [VB] Public Const Lat As AddressFamily

16 [JScript] public var Lat : AddressFamily;

17
18 *Description*

19 LAT address.
20

21 [C#] public const AddressFamily Max;

22 [C++] public: const AddressFamily Max;

23 [VB] Public Const Max As AddressFamily

24 [JScript] public var Max : AddressFamily;

25

1
2 *Description*

3 MAX address.

4
5 [C#] public const AddressFamily NetBios;

6 [C++] public: const AddressFamily NetBios;

7 [VB] Public Const NetBios As AddressFamily

8 [JScript] public var NetBios : AddressFamily;

9
10 *Description*

11 NetBios address.

12
13 [C#] public const AddressFamily NetworkDesigners;

14 [C++] public: const AddressFamily NetworkDesigners;

15 [VB] Public Const NetworkDesigners As AddressFamily

16 [JScript] public var NetworkDesigners : AddressFamily;

17
18 *Description*

19 Address for Network Designers OSI gateway-enabled protocols.

20
21 [C#] public const AddressFamily NS;

22 [C++] public: const AddressFamily NS;

23 [VB] Public Const NS As AddressFamily

24 [JScript] public var NS : AddressFamily;

1
2
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4
5
6
7
8
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11
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25

Description

Address for Xerox NS protocols.

[C#] public const AddressFamily Osi;
[C++] public: const AddressFamily Osi;
[VB] Public Const Osi As AddressFamily
[JScript] public var Osi : AddressFamily;

Description

Address for ISO protocols.

[C#] public const AddressFamily Pup;
[C++] public: const AddressFamily Pup;
[VB] Public Const Pup As AddressFamily
[JScript] public var Pup : AddressFamily;

Description

Address for PUP protocols.

[C#] public const AddressFamily Sna;
[C++] public: const AddressFamily Sna;
[VB] Public Const Sna As AddressFamily
[JScript] public var Sna : AddressFamily;

1
2 *Description*

3 IBM SNA address.

4
5 [C#] public const AddressFamily Unix;

6 [C++] public: const AddressFamily Unix;

7 [VB] Public Const Unix As AddressFamily

8 [JScript] public var Unix : AddressFamily;

9
10 *Description*

11 Unix local to host address.

12
13 [C#] public const AddressFamily Unknown;

14 [C++] public: const AddressFamily Unknown;

15 [VB] Public Const Unknown As AddressFamily

16 [JScript] public var Unknown : AddressFamily;

17
18 *Description*

19 Unknown address family.

20
21 [C#] public const AddressFamily Unspecified;

22 [C++] public: const AddressFamily Unspecified;

23 [VB] Public Const Unspecified As AddressFamily

24 [JScript] public var Unspecified : AddressFamily;

1
2 *Description*

3 Unspecified address family.
4

5 [C#] public const AddressFamily VoiceView;

6 [C++] public: const AddressFamily VoiceView;

7 [VB] Public Const VoiceView As AddressFamily

8 [JScript] public var VoiceView : AddressFamily;

9
10 *Description*

11 VoiceView address.

12 Methods:

13 LingerOption class (System.Net.Sockets)

14 ToString
15
16

17 *Description*

18 Contains information about a socket's linger time, the amount of time it will
19 remain after closing if data remains to be sent.

20 The settings of the **System.Net.Sockets.LingerOption** instance associated
21 with a **System.Net.Sockets.Socket** instance control the length of time that a
22 socket will remain after closing if data remains to be sent.

23 Constructors:

24 LingerOption

25 *Example Syntax:*

ToString

[C#] public LingerOption(bool enable, int seconds);

[C++] public: LingerOption(bool enable, int seconds);

[VB] Public Sub New(ByVal enable As Boolean, ByVal seconds As Integer)

[JScript] public function LingerOption(enable : Boolean, seconds : int);

Description

Initializes a new instance of the **System.Net.Sockets.LingerOption** class.

The **System.Net.Sockets.LingerOption** instance is created with **System.Net.Sockets.LingerOption.Enabled** property set to *enable* and the **System.Net.Sockets.LingerOption.LingerTime** property set to *seconds* . **true** to enable remaining connected after **System.Net.Sockets.Socket.Close** is called; otherwise, **false** . The number of seconds to remain connected after **System.Net.Sockets.Socket.Close** is called.

Properties:

Enabled

ToString

[C#] public bool Enabled {get; set;}

[C++] public: __property bool get_Enabled();public: __property void

set_Enabled(bool);

[VB] Public Property Enabled As Boolean

[JScript] public function get Enabled() : Boolean;public function set

Enabled(Boolean);

1
2 *Description*

3 Gets or sets a value indicating whether to linger after the socket is closed.

4 LingerTime

5 ToString

6
7 [C#] public int LingerTime {get; set;}

8 [C++] public: __property int get_LingerTime();public: __property void

9 set_LingerTime(int);

10 [VB] Public Property LingerTime As Integer

11 [JScript] public function get LingerTime() : int;public function set

12 LingerTime(int);

13
14 *Description*

15 Gets or sets the amount of time to remain connected after the socket is
16 closed.

17 MulticastOption class (System.Net.Sockets)

18 ToString

19
20
21 *Description*

22 Contains IP address values for IP multicast packets.

23 The **System.Net.Sockets.MulticastOption** class sets IP address values
24 when joining or leaving an IP multicast group. It is used with the
25 **System.Net.Sockets.Socket.SetSocketOption(System.Net.Sockets.SocketOptio**

nLevel, System.Net.Sockets.SocketOptionName, System.Int32) and
System.Net.Sockets.Socket.GetSocketOption(System.Net.Sockets.SocketOptionName, System.Net.Sockets.SocketOptionName) methods when the *optionName* parameter is set to **System.Net.Sockets.SocketOptionName.AddMembership** or **System.Net.Sockets.SocketOptionName.DropMembership**.

MulticastOption

Example Syntax:

ToString

[C#] public MulticastOption(IPAddress group);

[C++] public: MulticastOption(IPAddress* group);

[VB] Public Sub New(ByVal group As IPAddress)

[JScript] public function MulticastOption(group : IPAddress);

Description

Initializes a new version of the **System.Net.Sockets.MulticastOption** class for the specified IP multicast group. The IP address of the multicast group.

MulticastOption

Example Syntax:

ToString

[C#] public MulticastOption(IPAddress group, IPAddress mcint);

[C++] public: MulticastOption(IPAddress* group, IPAddress* mcint);

[VB] Public Sub New(ByVal group As IPAddress, ByVal mcint As IPAddress)

[JScript] public function MulticastOption(group : IPAddress, mcint : IPAddress);

1 Initializes a new instance of the **System.Net.Sockets.MulticastOption** class.

3 *Description*

4 Initializes a new instance of the **System.Net.Sockets.MulticastOption**
5 class with the specified IP multicast group address and local interface address. The
6 group IP address. The local IP address.

7 Group

8 ToString

10 [C#] public IPAddress Group {get; set;}

11 [C++] public: __property IPAddress* get_Group();public: __property void
12 set_Group(IPAddress*);

13 [VB] Public Property Group As IPAddress

14 [JScript] public function get Group() : IPAddress;public function set
15 Group(IPAddress);

17 *Description*

18 Gets or sets the IP address of a multicast group.

19 Valid IP addresses for multicast packets are in the range 224.0.0.0 to
20 239.255.255.255.

21 LocalAddress

22 ToString

24 [C#] public IPAddress LocalAddress {get; set;}

25 [C++] public: __property IPAddress* get_LocalAddress();public: __property void

1 set_LocalAddress(IPAddress*);

2 [VB] Public Property LocalAddress As IPAddress

3 [JScript] public function get LocalAddress() : IPAddress;public function set

4 LocalAddress(IPAddress);

5
6 *Description*

7 Gets or sets the local address associated with a multicast group.

8 The **System.Net.Sockets.MulticastOption.LocalAddress** property
9 contains the IP address of the interface associated with the multicast group
10 membership. If **System.Net.Sockets.MulticastOption.LocalAddress** is set to
11 **System.Net.IPAddress.Any** , the default interface is used.

12 NetworkStream class (System.Net.Sockets)

13 ToString

14
15
16 *Description*

17 Provides the underlying stream of data for network access.

18 **System.Net.Sockets.NetworkStream** implements the standard .NET
19 Framework stream mechanism to send and receive data through network sockets.

20 NetworkStream

21 *Example Syntax:*

22 ToString

23
24 [C#] public NetworkStream(Socket socket);

25 [C++] public: NetworkStream(Socket* socket);

1 [VB] Public Sub New(ByVal socket As Socket)

2 [JScript] public function NetworkStream(socket : Socket); Creates a new instance
3 of the **System.Net.Sockets.NetworkStream** class.

4
5 *Description*

6 Creates a new instance of the **System.Net.Sockets.NetworkStream** class
7 for the specified **System.Net.Sockets.Socket** .

8 The **System.Net.Sockets.NetworkStream** is created with read/write access
9 to the specified socket. The **System.Net.Sockets.NetworkStream** does not own
10 the underlying socket, so calling the **System.Net.Sockets.NetworkStream.Close**
11 method will not close the socket. The **System.Net.Sockets.Socket** that provides
12 the network data for the new **System.Net.Sockets.NetworkStream** .

13 NetworkStream

14 *Example Syntax:*

15 ToString
16

17 [C#] public NetworkStream(Socket socket, bool ownsSocket);

18 [C++] public: NetworkStream(Socket* socket, bool ownsSocket);

19 [VB] Public Sub New(ByVal socket As Socket, ByVal ownsSocket As Boolean)

20 [JScript] public function NetworkStream(socket : Socket, ownsSocket : Boolean);
21

22 *Description*

23 Initializes a new instance of the **System.Net.Sockets.NetworkStream** class
24 for the specified socket with the specified **System.Net.Sockets.Socket** ownership.
25

The **System.Net.Sockets.NetworkStream** is created with read/write access to the specified socket. If *ownsSocket* is **true**, the **System.Net.Sockets.NetworkStream** owns the underlying socket, and calling **System.Net.Sockets.NetworkStream.Close** will also close the underlying socket. The network socket that the new **System.Net.Sockets.NetworkStream** will encapsulate. **true** if the socket will be owned by this **System.Net.Sockets.NetworkStream** instance; otherwise, **false**.

NetworkStream

Example Syntax:

ToString

[C#] public NetworkStream(Socket socket, FileAccess access);

[C++] public: NetworkStream(Socket* socket, FileAccess access);

[VB] Public Sub New(ByVal socket As Socket, ByVal access As FileAccess)

[JScript] public function NetworkStream(socket : Socket, access : FileAccess);

Description

Creates a new instance of the **System.Net.Sockets.NetworkStream** class for the specified **System.Net.Sockets.Socket** with the specified access rights.

The **System.Net.Sockets.NetworkStream** is created with the specified access to the specified socket. The **System.Net.Sockets.NetworkStream** does not own the underlying socket, so calling the **System.Net.Sockets.NetworkStream.Close** method will not close the socket. The **System.Net.Sockets.Socket** that provides the network data. One of the **System.IO.FileAccess** values that sets the

1 **System.Net.Sockets.NetworkStream.CanRead** and

2 **System.Net.Sockets.NetworkStream.CanWrite** properties of the

3 **System.Net.Sockets.NetworkStream** .

4 **NetworkStream**

5 *Example Syntax:*

6 **ToString**

7
8 [C#] public NetworkStream(Socket socket, FileAccess access, bool ownsSocket);

9 [C++] public: NetworkStream(Socket* socket, FileAccess access, bool
10 ownsSocket);

11 [VB] Public Sub New(ByVal socket As Socket, ByVal access As FileAccess,
12 ByVal ownsSocket As Boolean)

13 [JScript] public function NetworkStream(socket : Socket, access : FileAccess,
14 ownsSocket : Boolean);

15
16 *Description*

17 Creates a new instance of the **System.Net.Sockets.NetworkStream** class
18 for the specified **System.Net.Sockets.Socket** with the specified access rights and
19 the specified **System.Net.Sockets.Socket** ownership.

20 The **System.Net.Sockets.NetworkStream** is created with the specified
21 access to the specified socket. If *ownsSocket* is **true** , the
22 **System.Net.Sockets.NetworkStream** owns the underlying socket, and calling
23 **System.Net.Sockets.NetworkStream.Close** will also close the underlying socket.
24 The **System.Net.Sockets.Socket** that provides the network data. One of the
25 **System.IO.FileAccess** values that sets the

1 **System.Net.Sockets.NetworkStream.CanRead** and

2 **System.Net.Sockets.NetworkStream.CanWrite** properties of the

3 **System.Net.Sockets.NetworkStream** . **true** if the socket will be owned by this

4 **System.Net.Sockets.NetworkStream** instance; otherwise, **false**.

5 **CanRead**

6 **ToString**

7
8 [C#] public override bool CanRead {get;}

9 [C++] public: __property virtual bool get_CanRead();

10 [VB] Overrides Public ReadOnly Property CanRead As Boolean

11 [JScript] public function get CanRead() : Boolean;

12
13 *Description*

14 Gets a value indicating whether the current stream supports reading.

15 **CanSeek**

16 **ToString**

17
18 [C#] public override bool CanSeek {get;}

19 [C++] public: __property virtual bool get_CanSeek();

20 [VB] Overrides Public ReadOnly Property CanSeek As Boolean

21 [JScript] public function get CanSeek() : Boolean;

22
23 *Description*

24 Gets a value indicating whether the stream supports seeking. This property
25 always returns **false** .

CanWrite

ToString

[C#] public override bool CanWrite {get;}

[C++] public: __property virtual bool get_CanWrite();

[VB] Overrides Public ReadOnly Property CanWrite As Boolean

[JScript] public function get CanWrite() : Boolean;

Description

Gets a value that indicates whether the current stream supports writing.

DataAvailable

ToString

[C#] public virtual bool DataAvailable {get;}

[C++] public: __property virtual bool get_DataAvailable();

[VB] Overridable Public ReadOnly Property DataAvailable As Boolean

[JScript] public function get DataAvailable() : Boolean;

Description

Gets a value indicating whether data is available on the stream to be read.

Length

ToString

[C#] public override long Length {get;}

[C++] public: __property virtual __int64 get_Length();

1 [VB] Overrides Public ReadOnly Property Length As Long

2 [JScript] public function get Length() : long;

3
4 *Description*

5 The length of the data available on the stream. This property always throws
6 a **System.NotSupportedException** .

7 Position

8 ToString

9
10 [C#] public override long Position {get; set;}

11 [C++] public: __property virtual __int64 get _Position();public: __property virtual
12 void set _Position(__int64);

13 [VB] Overrides Public Property Position As Long

14 [JScript] public function get Position() : long;public function set Position(long);

15
16 *Description*

17 Gets or sets the current position in the stream. This property always throws
18 a **System.NotSupportedException** .

19 Readable

20 ToString

21
22 [C#] protected bool Readable {get; set;}

23 [C++] protected: __property bool get _Readable();protected: __property void
24 set _Readable(bool);

25 [VB] Protected Property Readable As Boolean

1 [JScript] protected function get Readable() : Boolean;protected function set

2 Readable(Boolean);

3
4 *Description*

5 Gets or sets a value indicating that the stream can be read.

6 The **System.Net.Sockets.NetworkStream.Readable** property is accessible
7 only through this class or a derived class. Other classes can determine whether a
8 **System.Net.Sockets.NetworkStream** is readable by checking the
9 **System.Net.Sockets.NetworkStream.CanRead** property.

10 Socket

11 ToString

12
13 [C#] protected Socket Socket {get;}

14 [C++] protected: __property Socket* get_Socket();

15 [VB] Protected ReadOnly Property Socket As Socket

16 [JScript] protected function get Socket() : Socket;

17
18 *Description*

19 Gets the underlying network connection.

20 The **System.Net.Sockets.NetworkStream.Socket** property represents the
21 underlying network socket that this **System.Net.Sockets.NetworkStream**
22 encapsulates.

23 Writable

24 ToString

1
2 [C#] protected bool Writeable {get; set;}

3 [C++] protected: __property bool get _Writeable();protected: __property void

4 set _Writeable(bool);

5 [VB] Protected Property Writeable As Boolean

6 [JScript] protected function get Writeable() : Boolean;protected function set

7 Writeable(Boolean);

8
9 *Description*

10 Gets a value that indicates whether the stream is writable.

11 The **System.Net.Sockets.NetworkStream.Writeable** property is
12 accessible only through this class or a derived class. Other classes can determine
13 whether a **System.Net.Sockets.NetworkStream** is writable by checking the
14 **System.Net.Sockets.NetworkStream.CanWrite** property.

15 **BeginRead**

16
17 [C#] public override IAsyncResult BeginRead(byte[] buffer, int offset, int size,
18 AsyncCallback callback, object state);

19 [C++] public: IAsyncResult* BeginRead(unsigned char buffer __gc[], int offset,
20 int size, AsyncCallback* callback, Object* state);

21 [VB] Overrides Public Function BeginRead(ByteVal buffer() As Byte, ByteVal offset
22 As Integer, ByteVal size As Integer, ByteVal callback As AsyncCallback, ByteVal state
23 As Object) As IAsyncResult

24 [JScript] public override function BeginRead(buffer : Byte[], offset : int, size : int,
25 callback : AsyncCallback, state : Object) : IAsyncResult;

Description

Begins an asynchronous read from a stream.

Return Value: An **System.IAsyncResult** representing the asynchronous call.

The

System.Net.Sockets.NetworkStream.BeginRead(System.Byte[],System.Int32, System.Int32,System.AsyncCallback,System.Object) method begins an asynchronous request for data from a network stream. The method that implements the **System.AsyncCallback** delegate uses the **System.Net.Sockets.NetworkStream.EndRead(System.IAsyncResult)** method to return the amount of data read from the stream. The location in memory that stores the data from the stream. The location in *buffer* to begin storing the data to. The size of *buffer* . The delegate to call when the asynchronous call is complete. An object containing additional information supplied by the client.

BeginWrite

[C#] public override IAsyncResult BeginWrite(byte[] buffer, int offset, int size, AsyncCallback callback, object state);

[C++] public: IAsyncResult* BeginWrite(unsigned char buffer __gc[], int offset, int size, AsyncCallback* callback, Object* state);

[VB] Overrides Public Function BeginWrite(ByVal buffer() As Byte, ByVal offset As Integer, ByVal size As Integer, ByVal callback As AsyncCallback, ByVal state As Object) As IAsyncResult

[JScript] public override function BeginWrite(buffer : Byte[], offset : int, size : int, callback : AsyncCallback, state : Object) : IAsyncResult;

Description

Begins an asynchronous write to a stream.

Return Value: An **System.IAsyncResult** representing the asynchronous call.

The

System.Net.Sockets.NetworkStream.BeginWrite(System.Byte[],System.Int32, System.Int32,System.AsyncCallback,System.Object) method begins to send data asynchronously to the network stream. The method that implements the **System.AsyncCallback** delegate uses the **System.Net.Sockets.NetworkStream.EndRead(System.IAsyncResult)** method to complete sending the data. The location in memory that holds the data to send. The location in *buffer* to begin sending the data. The size of *buffer* . The delegate to call when the asynchronous call is complete. An object containing additional information supplied by the client.

Close

[C#] public override void Close();

[C++] public: void Close();

[VB] Overrides Public Sub Close()

[JScript] public override function Close();

Description

Closes the stream and optionally closes the underlying socket.

The **System.Net.Sockets.NetworkStream.Close** method frees resources used by the **System.Net.Sockets.NetworkStream** instance and, if the

System.Net.Sockets.NetworkStream owns the underlying socket, closes the underlying socket.

Dispose

[C#] protected virtual void Dispose(bool disposing);

[C++] protected: virtual void Dispose(bool disposing);

[VB] Overridable Protected Sub Dispose(ByVal disposing As Boolean)

[JScript] protected function Dispose(disposing : Boolean);

Description

Cleans up a network stream. **true** if this method was called by another method such as **System.Net.Sockets.NetworkStream.Close** or **System.Net.Sockets.NetworkStream.Dispose(System.Boolean)**; **false** if this method was called by the finalizer.

EndRead

[C#] public override int EndRead(IAsyncResult asyncResult);

[C++] public: int EndRead(IAsyncResult* asyncResult);

[VB] Overrides Public Function EndRead(ByVal asyncResult As IAsyncResult)

As Integer

[JScript] public override function EndRead(asyncResult : IAsyncResult) : int;

Description

Handles the end of an asynchronous read.

Return Value: The number of bytes read from the stream.

The

System.Net.Sockets.NetworkStream.EndRead(System.IAsyncResult) method completes an asynchronous read of the network stream started with the **System.Net.Sockets.NetworkStream.BeginRead(System.Byte[],System.Int32, System.Int32,System.AsyncCallback,System.Object)** method. An **System.IAsyncResult** representing an asynchronous call.

EndWrite

[C#] public override void EndWrite(IAsyncResult asyncResult);
[C++] public: void EndWrite(IAsyncResult* asyncResult);
[VB] Overrides Public Sub EndWrite(ByVal asyncResult As IAsyncResult)
[JScript] public override function EndWrite(asyncResult : IAsyncResult);

Description

Handles the end of an asynchronous write.

The

System.Net.Sockets.NetworkStream.EndWrite(System.IAsyncResult) method completes an asynchronous write to a network stream started with the **System.Net.Sockets.NetworkStream.BeginWrite(System.Byte[],System.Int32, System.Int32,System.AsyncCallback,System.Object)** method. The **System.IAsyncResult** representing the asynchronous call.

Finalize

[C#] ~NetworkStream();
[C++] ~NetworkStream();

1 [VB] Overrides Protected Sub Finalize()

2 [JScript] protected override function Finalize();

3
4 *Description*

5 Frees resources used by the **System.Net.Sockets.NetworkStream** .

6 The **System.Net.Sockets.NetworkStream** finalizer calls the
7 **System.Net.Sockets.NetworkStream.Close** method to close the stream.

8 **Flush**

9
10 [C#] public override void Flush();

11 [C++] public: void Flush();

12 [VB] Overrides Public Sub Flush()

13 [JScript] public override function Flush();

14
15 *Description*

16 Flushes data from the stream. This method is reserved for future use.

17 The **System.Net.Sockets.NetworkStream.Flush** method implements the
18 **System.IO.Stream.Flush** method but, because
19 **System.Net.Sockets.NetworkStream** is not buffered, has no effect on network
20 streams. Calling the **System.Net.Sockets.NetworkStream.Flush** method will not
21 throw an exception.

22 **Read**

23
24 [C#] public override int Read(in byte[] buffer, int offset, int size);

25 [C++] public: int Read(__in unsigned char* buffer __gc[], int offset, int size);

1 [VB] Overrides Public Function Read(ByteVal buffer() As Byte, ByteVal offset As
2 Integer, ByteVal size As Integer) As Integer
3 [JScript] public override function Read(in buffer : Byte[], offset : int, size : int) :
4 int;

6 *Description*

7 Reads data from the stream.

8 *Return Value:* The number of bytes read from the stream.

9 The

10 **System.Net.Sockets.NetworkStream.Read(System.Byte[],System.Int32,System**
11 **.Int32)** method reads data from the network stream into a data buffer. The location
12 in memory to store data read from the stream. The location in the buffer to begin
13 storing the data to. The number of bytes to read from the stream.

14 *Seek*

15
16 [C#] public override long Seek(long offset, SeekOrigin origin);

17 [C++] public: __int64 Seek(__int64 offset, SeekOrigin origin);

18 [VB] Overrides Public Function Seek(ByteVal offset As Long, ByteVal origin As
19 SeekOrigin) As Long

20 [JScript] public override function Seek(offset : long, origin : SeekOrigin) : long;

22 *Description*

23 Sets the current position of the stream to the given value. This method
24 always throws a **System.NotSupportedException** . This parameter is not used.

25 This parameter is not used.

SetLength

[C#] public override void SetLength(long value);
[C++] public: void SetLength(__int64 value);
[VB] Overrides Public Sub SetLength(ByVal value As Long)
[JScript] public override function SetLength(value : long);

Description

Sets the length of the stream. This method always throws a **System.NotSupportedException** . This parameter is not used.

IDisposable.Dispose

[C#] void IDisposable.Dispose();
[C++] void IDisposable::Dispose();
[VB] Sub Dispose() Implements IDisposable.Dispose
[JScript] function IDisposable.Dispose();

Write

[C#] public override void Write(byte[] buffer, int offset, int size);
[C++] public: void Write(unsigned char buffer __gc[], int offset, int size);
[VB] Overrides Public Sub Write(ByVal buffer() As Byte, ByVal offset As Integer, ByVal size As Integer)
[JScript] public override function Write(buffer : Byte[], offset : int, size : int);

Description

Writes data to the stream.

Return Value: The number of bytes written to the stream.

The

System.Net.Sockets.NetworkStream.Write(System.Byte[],System.Int32,System.Int32) method sends the contents of a data buffer to the network. The data to write to the stream. The location in the buffer to start writing data from. The number of bytes to write to the stream.

ProtocolFamily enumeration (System.Net.Sockets)

WriteByte

Description

Specifies the type of protocol that an instance of the **System.Net.Sockets.Socket** class can use.

The **System.Net.Sockets.ProtocolFamily** enumeration specifies the protocol scheme used by the **System.Net.Sockets.Socket** class to resolve an address. For example, **System.Net.Sockets.ProtocolFamily.InterNetwork** indicates that the IP version 4 protocol is expected when a **System.Net.Sockets.Socket** connects to an endpoint.

WriteByte

[C#] public const ProtocolFamily AppleTalk;

[C++] public: const ProtocolFamily AppleTalk;

[VB] Public Const AppleTalk As ProtocolFamily

[JScript] public var AppleTalk : ProtocolFamily;

Description

AppleTalk protocol.

WriteByte

[C#] public const ProtocolFamily Atm;

[C++] public: const ProtocolFamily Atm;

[VB] Public Const Atm As ProtocolFamily

[JScript] public var Atm : ProtocolFamily;

Description

Native ATM services protocol.

WriteByte

[C#] public const ProtocolFamily Banyan;

[C++] public: const ProtocolFamily Banyan;

[VB] Public Const Banyan As ProtocolFamily

[JScript] public var Banyan : ProtocolFamily;

Description

Banyan protocol.

WriteByte

[C#] public const ProtocolFamily Ccitt;

[C++] public: const ProtocolFamily Ccitt;

1 [VB] Public Const Ccitt As ProtocolFamily

2 [JScript] public var Ccitt : ProtocolFamily;

3
4 *Description*

5 CCITT protocol, such as X.25.

6 WriteByte

7
8 [C#] public const ProtocolFamily Chaos;

9 [C++] public: const ProtocolFamily Chaos;

10 [VB] Public Const Chaos As ProtocolFamily

11 [JScript] public var Chaos : ProtocolFamily;

12
13 *Description*

14 MIT CHAOS protocol.

15 WriteByte

16
17 [C#] public const ProtocolFamily Cluster;

18 [C++] public: const ProtocolFamily Cluster;

19 [VB] Public Const Cluster As ProtocolFamily

20 [JScript] public var Cluster : ProtocolFamily;

21
22 *Description*

23 Microsoft Cluster products protocol.

24 WriteByte

1
2 [C#] public const ProtocolFamily DataKit;
3 [C++] public: const ProtocolFamily DataKit;
4 [VB] Public Const DataKit As ProtocolFamily
5 [JScript] public var DataKit : ProtocolFamily;
6

7 *Description*

8 DataKit protocol.

9 WriteByte
10

11 [C#] public const ProtocolFamily DataLink;
12 [C++] public: const ProtocolFamily DataLink;
13 [VB] Public Const DataLink As ProtocolFamily
14 [JScript] public var DataLink : ProtocolFamily;
15

16 *Description*

17 Direct data link protocol.

18 WriteByte
19

20 [C#] public const ProtocolFamily DecNet;
21 [C++] public: const ProtocolFamily DecNet;
22 [VB] Public Const DecNet As ProtocolFamily
23 [JScript] public var DecNet : ProtocolFamily;
24

25 *Description*

DECNet protocol.

WriteByte

[C#] public const ProtocolFamily Ecma;

[C++] public: const ProtocolFamily Ecma;

[VB] Public Const Ecma As ProtocolFamily

[JScript] public var Ecma : ProtocolFamily;

Description

European Computer Manufactures Association (ECMA) protocol.

WriteByte

[C#] public const ProtocolFamily FireFox;

[C++] public: const ProtocolFamily FireFox;

[VB] Public Const FireFox As ProtocolFamily

[JScript] public var FireFox : ProtocolFamily;

Description

FireFox protocol.

WriteByte

[C#] public const ProtocolFamily HyperChannel;

[C++] public: const ProtocolFamily HyperChannel;

[VB] Public Const HyperChannel As ProtocolFamily

[JScript] public var HyperChannel : ProtocolFamily;

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Description

NSC HyperChannel protocol.
WriteByte

```
[C#] public const ProtocolFamily Ieee12844;  
[C++] public: const ProtocolFamily Ieee12844;  
[VB] Public Const Ieee12844 As ProtocolFamily  
[JScript] public var Ieee12844 : ProtocolFamily;
```

Description

IEEE 1284.4 workgroup protocol.
WriteByte

```
[C#] public const ProtocolFamily ImpLink;  
[C++] public: const ProtocolFamily ImpLink;  
[VB] Public Const ImpLink As ProtocolFamily  
[JScript] public var ImpLink : ProtocolFamily;
```

Description

ARPANET IMP protocol.
WriteByte

```
[C#] public const ProtocolFamily InterNetwork;  
[C++] public: const ProtocolFamily InterNetwork;
```

1 [VB] Public Const InterNetwork As ProtocolFamily

2 [JScript] public var InterNetwork : ProtocolFamily;

4 *Description*

5 IP version 4 protocol.

6 WriteByte

8 [C#] public const ProtocolFamily InterNetworkV6;

9 [C++] public: const ProtocolFamily InterNetworkV6;

10 [VB] Public Const InterNetworkV6 As ProtocolFamily

11 [JScript] public var InterNetworkV6 : ProtocolFamily;

13 *Description*

14 IP version 6 protocol.

15 WriteByte

17 [C#] public const ProtocolFamily Ipx;

18 [C++] public: const ProtocolFamily Ipx;

19 [VB] Public Const Ipx As ProtocolFamily

20 [JScript] public var Ipx : ProtocolFamily;

22 *Description*

23 IPX or SPX protocol.

24 WriteByte

1
2 [C#] public const ProtocolFamily Irda;
3 [C++] public: const ProtocolFamily Irda;
4 [VB] Public Const Irda As ProtocolFamily
5 [JScript] public var Irda : ProtocolFamily;

6
7 *Description*

8 IrDA protocol.

9 WriteByte

10
11 [C#] public const ProtocolFamily Iso;
12 [C++] public: const ProtocolFamily Iso;
13 [VB] Public Const Iso As ProtocolFamily
14 [JScript] public var Iso : ProtocolFamily;

15
16 *Description*

17 ISO protocol.

18 WriteByte

19
20 [C#] public const ProtocolFamily Lat;
21 [C++] public: const ProtocolFamily Lat;
22 [VB] Public Const Lat As ProtocolFamily
23 [JScript] public var Lat : ProtocolFamily;

24
25 *Description*

1 LAT protocol.

2 WriteByte

3

4 [C#] public const ProtocolFamily Max;

5 [C++] public: const ProtocolFamily Max;

6 [VB] Public Const Max As ProtocolFamily

7 [JScript] public var Max : ProtocolFamily;

8

9 *Description*

10 MAX protocol.

11 WriteByte

12

13 [C#] public const ProtocolFamily NetBios;

14 [C++] public: const ProtocolFamily NetBios;

15 [VB] Public Const NetBios As ProtocolFamily

16 [JScript] public var NetBios : ProtocolFamily;

17

18 *Description*

19 NetBios protocol.

20 WriteByte

21

22 [C#] public const ProtocolFamily NetworkDesigners;

23 [C++] public: const ProtocolFamily NetworkDesigners;

24 [VB] Public Const NetworkDesigners As ProtocolFamily

25 [JScript] public var NetworkDesigners : ProtocolFamily;

Description

Network Designers OSI gateway enabled protocol.

WriteByte

[C#] public const ProtocolFamily NS;

[C++] public: const ProtocolFamily NS;

[VB] Public Const NS As ProtocolFamily

[JScript] public var NS : ProtocolFamily;

Description

Xerox NS protocol.

WriteByte

[C#] public const ProtocolFamily Osi;

[C++] public: const ProtocolFamily Osi;

[VB] Public Const Osi As ProtocolFamily

[JScript] public var Osi : ProtocolFamily;

Description

OSI protocol.

WriteByte

[C#] public const ProtocolFamily Pup;

[C++] public: const ProtocolFamily Pup;

1 [VB] Public Const Pup As ProtocolFamily

2 [JScript] public var Pup : ProtocolFamily;

3

4 *Description*

5 PUP protocol.

6 WriteByte

7

8 [C#] public const ProtocolFamily Sna;

9 [C++] public: const ProtocolFamily Sna;

10 [VB] Public Const Sna As ProtocolFamily

11 [JScript] public var Sna : ProtocolFamily;

12

13 *Description*

14 IBM SNA protocol.

15 WriteByte

16

17 [C#] public const ProtocolFamily Unix;

18 [C++] public: const ProtocolFamily Unix;

19 [VB] Public Const Unix As ProtocolFamily

20 [JScript] public var Unix : ProtocolFamily;

21

22 *Description*

23 Unix local to host protocol.

24 WriteByte

25

1
2 [C#] public const ProtocolFamily Unknown;
3 [C++] public: const ProtocolFamily Unknown;
4 [VB] Public Const Unknown As ProtocolFamily
5 [JScript] public var Unknown : ProtocolFamily;
6

7 *Description*

8 Unknown protocol.

9 WriteByte
10

11 [C#] public const ProtocolFamily Unspecified;
12 [C++] public: const ProtocolFamily Unspecified;
13 [VB] Public Const Unspecified As ProtocolFamily
14 [JScript] public var Unspecified : ProtocolFamily;
15

16 *Description*

17 Unspecified protocol.

18 WriteByte
19

20 [C#] public const ProtocolFamily VoiceView;
21 [C++] public: const ProtocolFamily VoiceView;
22 [VB] Public Const VoiceView As ProtocolFamily
23 [JScript] public var VoiceView : ProtocolFamily;
24

25 *Description*

VoiceView protocol.

ProtocolType enumeration (System.Net.Sockets)

ToString

Description

Specifies the protocols that the **System.Net.Sockets.Socket** class supports.

The **System.Net.Sockets.ProtocolType** enumeration is used by the **System.Net.Sockets.Socket** class to indicate to the Windows Socket API the requested protocol for the socket. Low-level driver software for the requested protocol must be present on the computer for the **System.Net.Sockets.Socket** to be created.

ToString

[C#] public const ProtocolType Ggp;

[C++] public: const ProtocolType Ggp;

[VB] Public Const Ggp As ProtocolType

[JScript] public var Ggp : ProtocolType;

Description

Gateway To Gateway Protocol.

ToString

[C#] public const ProtocolType Icmp;

[C++] public: const ProtocolType Icmp;

1 [VB] Public Const Icmp As ProtocolType

2 [JScript] public var Icmp : ProtocolType;

3
4 *Description*

5 Internet Control Message Protocol.

6 ToString

7
8 [C#] public const ProtocolType Icmp;

9 [C++] public: const ProtocolType Icmp;

10 [VB] Public Const Icmp As ProtocolType

11 [JScript] public var Icmp : ProtocolType;

12
13 *Description*

14 IDP Protocol.

15 ToString

16
17 [C#] public const ProtocolType Igmp;

18 [C++] public: const ProtocolType Igmp;

19 [VB] Public Const Igmp As ProtocolType

20 [JScript] public var Igmp : ProtocolType;

21
22 *Description*

23 Internet Group Management Protocol.

24 ToString

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```
[C#] public const ProtocolType IP;  
[C++] public: const ProtocolType IP;  
[VB] Public Const IP As ProtocolType  
[JScript] public var IP : ProtocolType;
```

Description

Internet Protocol.
ToString

```
[C#] public const ProtocolType Ipx;  
[C++] public: const ProtocolType Ipx;  
[VB] Public Const Ipx As ProtocolType  
[JScript] public var Ipx : ProtocolType;
```

Description

IPX Protocol.
ToString

```
[C#] public const ProtocolType ND;  
[C++] public: const ProtocolType ND;  
[VB] Public Const ND As ProtocolType  
[JScript] public var ND : ProtocolType;
```

Description

1 Net Disk Protocol (unofficial).

2 ToString

3
4 [C#] public const ProtocolType Pup;

5 [C++] public: const ProtocolType Pup;

6 [VB] Public Const Pup As ProtocolType

7 [JScript] public var Pup : ProtocolType;

8
9 *Description*

10 PUP Protocol.

11 ToString

12
13 [C#] public const ProtocolType Raw;

14 [C++] public: const ProtocolType Raw;

15 [VB] Public Const Raw As ProtocolType

16 [JScript] public var Raw : ProtocolType;

17
18 *Description*

19 Raw UP packet protocol.

20 ToString

21
22 [C#] public const ProtocolType Spx;

23 [C++] public: const ProtocolType Spx;

24 [VB] Public Const Spx As ProtocolType

25 [JScript] public var Spx : ProtocolType;

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25

Description

SPX Protocol.

ToString

[C#] public const ProtocolType SpxII;
[C++] public: const ProtocolType SpxII;
[VB] Public Const SpxII As ProtocolType
[JScript] public var SpxII : ProtocolType;

Description

SPX Version 2 Protocol.

ToString

[C#] public const ProtocolType Tcp;
[C++] public: const ProtocolType Tcp;
[VB] Public Const Tcp As ProtocolType
[JScript] public var Tcp : ProtocolType;

Description

Transmission Control Protocol.

ToString

[C#] public const ProtocolType Udp;
[C++] public: const ProtocolType Udp;

1 [VB] Public Const Udp As ProtocolType

2 [JScript] public var Udp : ProtocolType;

3

4 *Description*

5 User Datagram Protocol.

6 ToString

7

8 [C#] public const ProtocolType Unknown;

9 [C++] public: const ProtocolType Unknown;

10 [VB] Public Const Unknown As ProtocolType

11 [JScript] public var Unknown : ProtocolType;

12

13 *Description*

14 Unknown protocol.

15 ToString

16

17 [C#] public const ProtocolType Unspecified;

18 [C++] public: const ProtocolType Unspecified;

19 [VB] Public Const Unspecified As ProtocolType

20 [JScript] public var Unspecified : ProtocolType;

21

22 *Description*

23 Unspecified protocol.

24 SelectMode enumeration (System.Net.Sockets)

25 ToString

Description

Defines the polling modes for the **System.Net.Sockets.Socket.Poll(System.Int32,System.Net.Sockets.SelectMode)** method.

The **System.Net.Sockets.SelectMode** enumeration defines the polling modes that can be passed to the **System.Net.Sockets.Socket.Poll(System.Int32,System.Net.Sockets.SelectMode)** method.

ToString

[C#] public const SelectMode SelectError;
[C++] public: const SelectMode SelectError;
[VB] Public Const SelectError As SelectMode
[JScript] public var SelectError : SelectMode;

Description

Error status mode.

ToString

[C#] public const SelectMode SelectRead;
[C++] public: const SelectMode SelectRead;
[VB] Public Const SelectRead As SelectMode
[JScript] public var SelectRead : SelectMode;

1
2 *Description*

3 Read status mode.

4 ToString

5
6 [C#] public const SelectMode SelectWrite;

7 [C++] public: const SelectMode SelectWrite;

8 [VB] Public Const SelectWrite As SelectMode

9 [JScript] public var SelectWrite : SelectMode;

10
11 *Description*

12 Write status mode.

13 Socket class (System.Net.Sockets)

14 ToString

15
16
17 *Description*

18 Implements the Berkeley sockets interface.

19 The **System.Net.Sockets.Socket** class creates a managed version of an
20 Internet transport service. Once the socket is created, it is bound to a specific
21 endpoint through the **System.Net.Sockets.Socket.Bind(System.Net.EndPoint)**
22 method, and the connection to that endpoint is established through the
23 **System.Net.Sockets.Socket.Connect(System.Net.EndPoint)** method.

24 Socket

25 *Example Syntax:*

ToString

```
[C#] public Socket(AddressFamily addressFamily, SocketType socketType,
ProtocolType protocolType);
[C++] public: Socket(AddressFamily addressFamily, SocketType socketType,
ProtocolType protocolType);
[VB] Public Sub New(ByVal addressFamily As AddressFamily, ByVal
socketType As SocketType, ByVal protocolType As ProtocolType)
[JScript] public function Socket(addressFamily : AddressFamily, socketType :
SocketType, protocolType : ProtocolType);
```

Description

Initializes a new instance of the **System.Net.Sockets.Socket** class.

The *addressFamily* parameter specifies the addressing scheme that the socket uses, the *socketType* parameter specifies the type of the socket, and the *protocolType* parameter specifies the protocol used by the socket. The three parameters are not independent. Some address families restrict which protocols can be used with them, and often the socket type is implicit in the protocol. If the combination of address family, socket type, and protocol type results in an invalid socket, a **System.Net.Sockets.SocketException** is thrown. One of the **System.Net.Sockets.AddressFamily** values. One of the **System.Net.Sockets.SocketType** values. One of the **System.Net.Sockets.ProtocolType** values.

AddressFamily

ToString

1
2 [C#] public AddressFamily AddressFamily {get;}

3 [C++] public: __property AddressFamily get_AddressFamily();

4 [VB] Public ReadOnly Property AddressFamily As AddressFamily

5 [JScript] public function get AddressFamily() : AddressFamily;

6
7 *Description*

8 Gets the address family of the socket.

9 Available

10 ToString

11
12 [C#] public int Available {get;}

13 [C++] public: __property int get_Available();

14 [VB] Public ReadOnly Property Available As Integer

15 [JScript] public function get Available() : int;

16
17 *Description*

18 Gets the amount of data that has been received from the network and is
19 available to be read.

20 Blocking

21 ToString

22
23 [C#] public bool Blocking {get; set;}

24 [C++] public: __property bool get_Blocking();public: __property void
25 set_Blocking(bool);

1 [VB] Public Property Blocking As Boolean

2 [JScript] public function get Blocking() : Boolean;public function set

3 Blocking(Boolean);

4
5 *Description*

6 Gets or sets a value that indicates whether the socket is in blocking mode.

7 The **System.Net.Sockets.Socket.Blocking** property indicates whether a
8 **System.Net.Sockets.Socket** is in blocking mode.

9 Connected

10 ToString

11
12 [C#] public bool Connected {get;}

13 [C++] public: __property bool get_Connected();

14 [VB] Public ReadOnly Property Connected As Boolean

15 [JScript] public function get Connected() : Boolean;

16
17 *Description*

18 Gets a value indicating whether a socket is connected to a remote resource.

19 **System.Net.Sockets.Socket.Connected** returns **true** if the socket has
20 either connected to a remote resource or accepted a connection from a remote
21 resource.

22 Handle

23 ToString

24
25 [C#] public IntPtr Handle {get;}

1 [C++] public: __property IntPtr get_Handle();

2 [VB] Public ReadOnly Property Handle As IntPtr

3 [JScript] public function get Handle() : IntPtr;

4
5 *Description*

6 Gets the operating system handle for the socket.

7 LocalEndPoint

8 ToString

9
10 [C#] public EndPoint LocalEndPoint {get;}

11 [C++] public: __property EndPoint* get_LocalEndPoint();

12 [VB] Public ReadOnly Property LocalEndPoint As EndPoint

13 [JScript] public function get LocalEndPoint() : EndPoint;

14
15 *Description*

16 Gets the local endpoint.

17 The **System.Net.Sockets.Socket.LocalEndPoint** property contains the
18 network connection information associated with the local network device.

19 ProtocolType

20 ToString

21
22 [C#] public ProtocolType ProtocolType {get;}

23 [C++] public: __property ProtocolType get_ProtocolType();

24 [VB] Public ReadOnly Property ProtocolType As ProtocolType

25 [JScript] public function get ProtocolType() : ProtocolType;

1
2 *Description*

3 Gets the protocol type of the socket.

4 RemoteEndPoint

5 ToString

6
7 [C#] public EndPoint RemoteEndPoint {get;}

8 [C++] public: __property EndPoint* get_RemoteEndPoint();

9 [VB] Public ReadOnly Property RemoteEndPoint As EndPoint

10 [JScript] public function get RemoteEndPoint() : EndPoint;

11
12 *Description*

13 Gets the remote endpoint.

14 The **System.Net.Sockets.Socket.RemoteEndPoint** property gets the
15 network connection information associated with the remote network device.

16 SocketType

17 ToString

18
19 [C#] public SocketType SocketType {get;}

20 [C++] public: __property SocketType get_SocketType();

21 [VB] Public ReadOnly Property SocketType As SocketType

22 [JScript] public function get SocketType() : SocketType;

23
24 *Description*

25 Gets the type of the socket.

Accept

```
[C#] public Socket Accept();  
[C++] public: Socket* Accept();  
[VB] Public Function Accept() As Socket  
[JScript] public function Accept() : Socket;
```

Description

Creates a new **System.Net.Sockets.Socket** to handle an incoming connection request.

Return Value: A **System.Net.Sockets.Socket** instance to handle an incoming connection request.

The **System.Net.Sockets.Socket.Accept** method extracts the first connection request from the queue of pending requests and creates a new **System.Net.Sockets.Socket** instance to handle it. The **System.Net.Sockets.Socket** returned by **System.Net.Sockets.Socket.Accept** is a duplicate of the current **System.Net.Sockets.Socket**.

BeginAccept

```
[C#] public IAsyncResult BeginAccept(AsyncCallback callback, object state);  
[C++] public: IAsyncResult* BeginAccept(AsyncCallback* callback, Object*  
state);  
[VB] Public Function BeginAccept(ByVal callback As AsyncCallback, ByVal  
state As Object) As IAsyncResult  
[JScript] public function BeginAccept(callback : AsyncCallback, state : Object) :
```

1 IAsyncResult;

3 *Description*

4 Begins an asynchronous request to create a new socket to accept an
5 incoming connection request.

6 *Return Value:* An **System.IAsyncResult** that references the asynchronous socket
7 creation.

8 The
9 **System.Net.Sockets.Socket.BeginAccept(System.AsyncCallback, System.Object)**
10 **t)** method starts an asynchronous request to create a socket to handle an incoming
11 connection request. The callback method that implements the
12 **System.AsyncCallback** delegate uses the
13 **System.Net.Sockets.Socket.EndAccept(System.IAsyncResult)** method to return
14 the socket. The **System.AsyncCallback** delegate. An object containing state
15 information for this request.

16 **BeginConnect**

17
18 [C#] public IAsyncResult BeginConnect(EndPoint remoteEP, AsyncCallback
19 callback, object state);

20 [C++] public: IAsyncResult* BeginConnect(EndPoint* remoteEP,
21 AsyncCallback* callback, Object* state);

22 [VB] Public Function BeginConnect(ByVal remoteEP As EndPoint, ByVal
23 callback As AsyncCallback, ByVal state As Object) As IAsyncResult

24 [JScript] public function BeginConnect(remoteEP : EndPoint, callback :
25 AsyncCallback, state : Object) : IAsyncResult;

Description

Begins an asynchronous request for a connection to a network device.

Return Value: An **System.IAsyncResult** that references the asynchronous connection.

The

System.Net.Sockets.Socket.BeginConnect(System.Net.EndPoint, System.AsyncCallback, System.Object) method starts an asynchronous request for a connection to a remote device. The callback method that implements the **System.AsyncCallback** delegate uses the **System.Net.Sockets.Socket.EndConnect(System.IAsyncResult)** method to return the socket. An **System.Net.EndPoint** instance that represents the remote device. The **System.AsyncCallback** delegate. An object that contains state information for this request.

BeginReceive

[C#] public IAsyncResult BeginReceive(byte[] buffer, int offset, int size, SocketFlags socketFlags, AsyncCallback callback, object state);

[C++] public: IAsyncResult* BeginReceive(unsigned char buffer __gc[], int offset, int size, SocketFlags socketFlags, AsyncCallback* callback, Object* state);

[VB] Public Function BeginReceive(ByVal buffer() As Byte, ByVal offset As Integer, ByVal size As Integer, ByVal socketFlags As SocketFlags, ByVal callback As AsyncCallback, ByVal state As Object) As IAsyncResult

[JScript] public function BeginReceive(buffer : Byte[], offset : int, size : int, socketFlags : SocketFlags, callback : AsyncCallback, state : Object) :

1 IAsyncResult;

3 *Description*

4 Begins to asynchronously receive data from a connected socket.

5 *Return Value:* An **System.IAsyncResult** that references the asynchronous read.

6 The

7 **System.Net.Sockets.Socket.BeginReceive(System.Byte[],System.Int32,System.**
8 **Int32,System.Net.Sockets.SocketFlags,System.AsyncCallback,System.Object)**

9 method starts asynchronously reading data from a socket. The callback method

10 that implements the **System.AsyncCallback** delegate uses the

11 **System.Net.Sockets.Socket.EndReceive(System.IAsyncResult)** method to

12 return the data read from the socket. The storage location for the received data.

13 The zero-based position in the *buffer* at which to store the received data. The

14 number of bytes to receive. A bitwise combination of the

15 **System.Net.Sockets.SocketFlags** values. The **System.AsyncCallback** delegate.

16 An object containing state information for this request.

17 **BeginReceiveFrom**

19 [C#] public IAsyncResult BeginReceiveFrom(byte[] buffer, int offset, int size,

20 SocketFlags socketFlags, ref EndPoint remoteEP, AsyncCallback callback, object
21 state);

22 [C++] public: IAsyncResult* BeginReceiveFrom(unsigned char buffer __gc[], int
23 offset, int size, SocketFlags socketFlags, EndPoint** remoteEP, AsyncCallback*
24 callback, Object* state);

25 [VB] Public Function BeginReceiveFrom(ByVal buffer() As Byte, ByVal offset

```

1 As Integer, ByVal size As Integer, ByVal socketFlags As SocketFlags, ByRef
2 remoteEP As EndPoint, ByVal callback As AsyncCallback, ByVal state As
3 Object) As IAsyncResult
4 [JScript] public function BeginReceiveFrom(buffer : Byte[], offset : int, size : int,
5 socketFlags : SocketFlags, remoteEP : EndPoint, callback : AsyncCallback, state :
6 Object) : IAsyncResult;

```

Description

Begins to asynchronously receive data from a specified network device.

Return Value: An **System.IAsyncResult** that references the asynchronous read.

The

System.Net.Sockets.Socket.BeginReceiveFrom(System.Byte[], System.Int32, System.Int32, System.Net.Sockets.SocketFlags, System.Net.EndPoint@, System.AsyncCallback, System.Object) method starts asynchronously reading data from a socket. The callback method that implements the **System.AsyncCallback** delegate uses the **System.Net.Sockets.Socket.EndReceive(System.IAsyncResult)** method to return the data read from the socket. The storage location for the received data. The zero-based position in the *buffer* at which to store the data. The number of bytes to receive. A bitwise combination of the **System.Net.Sockets.SocketFlags** values. An **System.Net.EndPoint** that represents the source of the data. The **System.AsyncCallback** delegate. An object containing state information for this request.

BeginSend

```

25 [C#] public IAsyncResult BeginSend(byte[] buffer, int offset, int size, SocketFlags

```

```

1 socketFlags, AsyncCallback callback, object state);
2 [C++] public: IAsyncResult* BeginSend(unsigned char buffer __gc[], int offset,
3 int size, SocketFlags socketFlags, AsyncCallback* callback, Object* state);
4 [VB] Public Function BeginSend(ByVal buffer() As Byte, ByVal offset As
5 Integer, ByVal size As Integer, ByVal socketFlags As SocketFlags, ByVal
6 callback As AsyncCallback, ByVal state As Object) As IAsyncResult
7 [JScript] public function BeginSend(buffer : Byte[], offset : int, size : int,
8 socketFlags : SocketFlags, callback : AsyncCallback, state : Object) :
9 IAsyncResult;

```

Description

Sends data asynchronously to a connected socket.

Return Value: An **System.IAsyncResult** that references the asynchronous send.

The

System.Net.Sockets.Socket.BeginSend(System.Byte[],System.Int32,System.Int32,System.Net.Sockets.SocketFlags,System.AsyncCallback,System.Object)

method starts asynchronously sending data through a socket. The callback method that implements the **System.AsyncCallback** delegate uses the

System.Net.Sockets.Socket.EndSend(System.IAsyncResult) method to

complete sending data. The data to send. The zero-based position in *buffer* at

which to begin sending data. The number of bytes to send. A bitwise combination

of the **System.Net.Sockets.SocketFlags** values. The **System.AsyncCallback**

delegate. An object containing state information for this request.

BeginSendTo

```

1
2 [C#] public IAsyncResult BeginSendTo(byte[] buffer, int offset, int size,
3 SocketFlags socketFlags, EndPoint remoteEP, AsyncCallback callback, object
4 state);
5 [C++] public: IAsyncResult* BeginSendTo(unsigned char buffer __gc[], int
6 offset, int size, SocketFlags socketFlags, EndPoint* remoteEP, AsyncCallback*
7 callback, Object* state);
8 [VB] Public Function BeginSendTo(ByVal buffer() As Byte, ByVal offset As
9 Integer, ByVal size As Integer, ByVal socketFlags As SocketFlags, ByVal
10 remoteEP As EndPoint, ByVal callback As AsyncCallback, ByVal state As
11 Object) As IAsyncResult
12 [JScript] public function BeginSendTo(buffer : Byte[], offset : int, size : int,
13 socketFlags : SocketFlags, remoteEP : EndPoint, callback : AsyncCallback, state :
14 Object) : IAsyncResult;
15

```

Description

Sends data asynchronously to a specific network device.

Return Value: An **System.IAsyncResult** that references the asynchronous send.

The

System.Net.Sockets.Socket.BeginSendTo(System.Byte[],System.Int32,System.Int32,System.Net.Sockets.SocketFlags,System.Net.EndPoint,System.AsyncCallback,System.Object) method starts asynchronously sending data through a socket. The callback method that implements the **System.AsyncCallback** delegate uses the **System.Net.Sockets.Socket.EndSendTo(System.IAsyncResult)** method to complete sending data. The data to send. The zero-based position in *buffer* at

which to begin sending data. The number of bytes to send. A bitwise combination of the **System.Net.Sockets.SocketFlags** values. An **System.Net.EndPoint** that represents the remote device. The **System.AsyncCallback** delegate. An object containing state information for this request.

Bind

[C#] public void Bind(EndPoint localEP);

[C++] public: void Bind(EndPoint* localEP);

[VB] Public Sub Bind(ByVal localEP As EndPoint)

[JScript] public function Bind(localEP : EndPoint);

Description

Associates a socket with a local endpoint.

You must call the

System.Net.Sockets.Socket.Bind(System.Net.EndPoint) method before you call the **System.Net.Sockets.Socket.Listen(System.Int32)** or **System.Net.Sockets.Socket.Connect(System.Net.EndPoint)** methods. The local **System.Net.EndPoint** to associate with the socket.

Close

[C#] public void Close();

[C++] public: void Close();

[VB] Public Sub Close()

[JScript] public function Close();

Description

Forces a socket connection to close.

The **System.Net.Sockets.Socket.Connected** property is set to **false** when the socket is closed.

Connect

[C#] public void Connect(EndPoint remoteEP);

[C++] public: void Connect(EndPoint* remoteEP);

[VB] Public Sub Connect(ByVal remoteEP As EndPoint)

[JScript] public function Connect(remoteEP : EndPoint);

Description

Establishes a connection to a remote device.

The **System.Net.Sockets.Socket.Connect(System.Net.EndPoint)** method establishes a network connection between **System.Net.Sockets.Socket.LocalEndPoint** and the device identified by *remoteEP*. Once the connection has been made, you can send data to the remote device with the **System.Net.Sockets.Socket.Send(System.Byte[],System.Int32,System.Net.Sockets.SocketFlags)** method, or receive data from the remote device with the **System.Net.Sockets.Socket.Receive(System.Byte[],System.Int32,System.Net.Sockets.SocketFlags)** method. An **System.Net.EndPoint** instance that represents the remote device.

Dispose

[C#] protected virtual void Dispose(bool disposing);

[C++] protected: virtual void Dispose(bool disposing);

[VB] Overridable Protected Sub Dispose(ByVal disposing As Boolean)

[JScript] protected function Dispose(disposing : Boolean);

Description

EndAccept

[C#] public Socket EndAccept(IAsyncResult asyncResult);

[C++] public: Socket* EndAccept(IAsyncResult* asyncResult);

[VB] Public Function EndAccept(ByVal asyncResult As IAsyncResult) As Socket

[JScript] public function EndAccept(asyncResult : IAsyncResult) : Socket;

Description

Ends an asynchronous request to create a new socket to accept an incoming connection request.

Return Value: A **System.Net.Sockets.Socket** to handle the incoming connection.

The **System.Net.Sockets.Socket.EndAccept(System.IAsyncResult)** method completes a request for a connection that was started with the **System.Net.Sockets.Socket.BeginAccept(System.AsyncCallback, System.Object)** method. The pending request for an incoming socket.

EndConnect

1
2 [C#] public void EndConnect(IAsyncResult asyncResult);

3 [C++] public: void EndConnect(IAsyncResult* asyncResult);

4 [VB] Public Sub EndConnect(ByVal asyncResult As IAsyncResult)

5 [JScript] public function EndConnect(asyncResult : IAsyncResult);

6
7 *Description*

8 Ends a pending synchronous connection request. The pending
9 asynchronous connection request.

10 EndReceive

11
12 [C#] public int EndReceive(IAsyncResult asyncResult);

13 [C++] public: int EndReceive(IAsyncResult* asyncResult);

14 [VB] Public Function EndReceive(ByVal asyncResult As IAsyncResult) As

15 Integer

16 [JScript] public function EndReceive(asyncResult : IAsyncResult) : int;

17
18 *Description*

19 Ends a pending asynchronous read.

20 *Return Value:* The number of bytes received. The pending asynchronous read.

21 EndReceiveFrom

22
23 [C#] public int EndReceiveFrom(IAsyncResult asyncResult, ref EndPoint
24 endPoint);

25 [C++] public: int EndReceiveFrom(IAsyncResult* asyncResult, EndPoint**

1 endPoint);

2 [VB] Public Function EndReceiveFrom(ByVal asyncResult As IAsyncResult,

3 ByRef endPoint As EndPoint) As Integer

4 [JScript] public function EndReceiveFrom(asyncResult : IAsyncResult, endPoint :

5 EndPoint) : int;

6
7 *Description*

8 Ends a pending asynchronous read from a specific endpoint.

9 *Return Value:* If successful, the number of bytes received. If unsuccessful, then if
10 the socket was closed with **System.Net.Sockets.Socket.Close** , returns 0;
11 otherwise, returns an invalid socket error. The pending asynchronous read. The
12 source endpoint.

13 EndSend

14
15 [C#] public int EndSend(IAsyncResult asyncResult);

16 [C++] public: int EndSend(IAsyncResult* asyncResult);

17 [VB] Public Function EndSend(ByVal asyncResult As IAsyncResult) As Integer

18 [JScript] public function EndSend(asyncResult : IAsyncResult) : int;

19
20 *Description*

21 Ends a pending asynchronous send.

22 *Return Value:* If successful, the number of bytes sent to the socket; otherwise, an
23 invalid socket error is returned. The pending asynchronous send.

24 EndSendTo

```

1
2 [C#] public int EndSendTo(IAsyncResult asyncResult);
3 [C++] public: int EndSendTo(IAsyncResult* asyncResult);
4 [VB] Public Function EndSendTo(ByVal asyncResult As IAsyncResult) As
5 Integer
6 [JScript] public function EndSendTo(asyncResult : IAsyncResult) : int;
7

```

Description

Ends a pending asynchronous send to a specific location.

Return Value: If successful, the number of bytes sent; otherwise, an invalid socket error is returned. The pending asynchronous send.

Finalize

```

14 [C#] ~Socket();
15 [C++] ~Socket();
16 [VB] Overrides Protected Sub Finalize()
17 [JScript] protected override function Finalize();
18

```

Description

Frees resources used by the **System.Net.Sockets.Socket** class.

The **System.Net.Sockets.Socket** class finalizer calls the **System.Net.Sockets.Socket.Close** method to close the socket and free resources associated with the socket.

GetHashCode

1
2 [C#] public override int GetHashCode();

3 [C++] public: int GetHashCode();

4 [VB] Overrides Public Function GetHashCode() As Integer

5 [JScript] public override function GetHashCode() : int;

6
7 *Description*

8
9 GetSocketOption

10
11 [C#] public object GetSocketOption(SocketOptionLevel optionLevel,
12 SocketOptionName optionName);

13 [C++] public: Object* GetSocketOption(SocketOptionLevel optionLevel,
14 SocketOptionName optionName);

15 [VB] Public Function GetSocketOption(ByVal optionLevel As
16 SocketOptionLevel, ByVal optionName As SocketOptionName) As Object

17 [JScript] public function GetSocketOption(optionLevel : SocketOptionLevel,
18 optionName : SocketOptionName) : Object; Gets the value of a socket option.

19
20 *Description*

21 Gets the value of a specified socket option.

22 *Return Value:* The value of the option. When *optionName* is set to

23 **System.Net.Sockets.SocketOptionName.Linger** the return value is an instance
24 of **System.Net.Sockets.LingerOption** . When *optionName* is set to

25 **System.Net.Sockets.SocketOptionName.AddMembership** or

System.Net.Sockets.SocketOptionName.DropMembership , the return value is an instance of **System.Net.Sockets.MulticastOption** . When *optionName* is any other value, the return value is an integer. One of the **System.Net.Sockets.SocketOptionLevel** values. One of the **System.Net.Sockets.SocketOptionName** values.

GetSocketOption

[C#] public void GetSocketOption(SocketOptionLevel optionLevel, SocketOptionName optionName, byte[] optionValue);
[C++] public: void GetSocketOption(SocketOptionLevel optionLevel, SocketOptionName optionName, unsigned char optionValue __gc[]);
[VB] Public Sub GetSocketOption(ByVal optionLevel As SocketOptionLevel, ByVal optionName As SocketOptionName, ByVal optionValue() As Byte)
[JScript] public function GetSocketOption(optionLevel : SocketOptionLevel, optionName : SocketOptionName, optionValue : Byte[]);

Description

Gets the specified socket option setting. One of the **System.Net.Sockets.SocketOptionLevel** values. One of the **System.Net.Sockets.SocketOptionName** values. The buffer to receive the option setting.

GetSocketOption

[C#] public byte[] GetSocketOption(SocketOptionLevel optionLevel, SocketOptionName optionName, int optionLength);

1 [C++] public: unsigned char GetSocketOption(SocketOptionLevel optionLevel,
2 SocketOptionName optionName, int optionLength) __gc[];

3 [VB] Public Function GetSocketOption(ByVal optionLevel As
4 SocketOptionLevel, ByVal optionName As SocketOptionName, ByVal
5 optionLength As Integer) As Byte()

6 [JScript] public function GetSocketOption(optionLevel : SocketOptionLevel,
7 optionName : SocketOptionName, optionLength : int) : Byte[];

8 *Description*

9 Gets the value of the specified socket option and returns an array.

10 *Return Value:* An array of bytes containing the value of the socket option.

11 The *optionLength* parameter sets the maximum size of the returned byte
12 array. If the option value requires fewer bytes, the array will contain only that
13 many bytes. If the option value requires more bytes, a

14 **System.Net.Sockets.SocketException** will be thrown. One of the

15 **System.Net.Sockets.SocketOptionLevel** values. One of the

16 **System.Net.Sockets.SocketOptionName** values. The length, in bytes, of the
17 expected return value.
18

19 **IOControl**

20
21 [C#] public int IOControl(int ioControlCode, byte[] optionInValue, byte[]
22 optionOutValue);

23 [C++] public: int IOControl(int ioControlCode, unsigned char optionInValue
24 __gc[], unsigned char optionOutValue __gc[]);

25 [VB] Public Function IOControl(ByVal ioControlCode As Integer, ByVal

1 optionInValue() As Byte, ByVal optionOutValue() As Byte) As Integer

2 [JScript] public function IOControl(ioControlCode : int, optionInValue : Byte[],
3 optionOutValue : Byte[]) : int;

4
5 *Description*

6 Sets low-level operating modes for the socket.

7 *Return Value:* The number of bytes returned in *optionOutValue* .

8 The

9 **System.Net.Sockets.Socket.IOControl(System.Int32,System.Byte[],System.By**
10 **te[])** method provides low-level access to the operating system socket underlying
11 the **System.Net.Sockets.Socket** class instance. For more information about
12 **System.Net.Sockets.Socket.IOControl(System.Int32,System.Byte[],System.By**
13 **te[])** , see the documentation in MSDN. The control code of the operation to
14 perform. The input data required by the operation. The output data returned by the
15 operation.

16 Listen

17
18 [C#] public void Listen(int backlog);

19 [C++] public: void Listen(int backlog);

20 [VB] Public Sub Listen(ByVal backlog As Integer)

21 [JScript] public function Listen(backlog : int);

22
23 *Description*

24 Places a socket in a listening state.

If **System.Net.Sockets.Socket.Listen(System.Int32)** is successful,
System.Net.Sockets.Socket.Connected is set to **true** . Maximum length of the
queue of pending connections.

Poll

[C#] public bool Poll(int microSeconds, SelectMode mode);

[C++] public: bool Poll(int microSeconds, SelectMode mode);

[VB] Public Function Poll(ByVal microSeconds As Integer, ByVal mode As
SelectMode) As Boolean

[JScript] public function Poll(microSeconds : int, mode : SelectMode) : Boolean;

Description

Determines the status of the socket.

Return Value: Mode Return Value **SelectRead (System.Net.Sockets.SelectMode)** **true** if **System.Net.Sockets.Socket.Listen(System.Int32)** has been called and a connection is pending, **System.Net.Sockets.Socket.Accept** will succeed -or- **true** if data is available for reading -or- **true** , if connection has been closed, reset, or terminated; otherwise, returns **false** . The time to wait for a response, in microseconds. One of the **System.Net.Sockets.SelectMode** values.

Receive

[C#] public int Receive(byte[] buffer);

[C++] public: int Receive(unsigned char buffer __gc[]);

[VB] Public Function Receive(ByVal buffer() As Byte) As Integer

[JScript] public function Receive(buffer : Byte[]) : int;

1
2 *Description*

3 Receives data from a connected socket into a specific location of the
4 receive buffer.

5 *Return Value:* The number of bytes received. Storage location for received data.

6 Receive

7
8 [C#] public int Receive(byte[] buffer, SocketFlags socketFlags);

9 [C++] public: int Receive(unsigned char buffer __gc[], SocketFlags socketFlags);

10 [VB] Public Function Receive(ByVal buffer() As Byte, ByVal socketFlags As
11 SocketFlags) As Integer

12 [JScript] public function Receive(buffer : Byte[], socketFlags : SocketFlags) : int;

13
14 *Description*

15 Receives data from a connected socket into a specific location of the
16 receive buffer.

17 *Return Value:* The number of bytes received. Storage location for received data. A
18 bitwise combination of the **System.Net.Sockets.SocketFlags** values.

19 Receive

20
21 [C#] public int Receive(byte[] buffer, int size, SocketFlags socketFlags);

22 [C++] public: int Receive(unsigned char buffer __gc[], int size, SocketFlags
23 socketFlags);

24 [VB] Public Function Receive(ByVal buffer() As Byte, ByVal size As Integer,
25 ByVal socketFlags As SocketFlags) As Integer

[JScript] public function Receive(buffer : Byte[], size : int, socketFlags : SocketFlags) : int; Receives data from a connected socket.

Description

Receives data from a connected socket into a specific location of the receive buffer.

Return Value: The number of bytes received. Storage location for received data. The number of bytes to receive. A bitwise combination of the **System.Net.Sockets.SocketFlags** values.

Receive

[C#] public int Receive(byte[] buffer, int offset, int size, SocketFlags socketFlags);

[C++] public: int Receive(unsigned char buffer __gc[], int offset, int size, SocketFlags socketFlags);

[VB] Public Function Receive(ByVal buffer() As Byte, ByVal offset As Integer, ByVal size As Integer, ByVal socketFlags As SocketFlags) As Integer

[JScript] public function Receive(buffer : Byte[], offset : int, size : int, socketFlags : SocketFlags) : int;

Description

Receives data from a connected socket into a specific location of the receive buffer.

Return Value: The number of bytes received. Storage location for received data.

The location in *buffer* to store the received data. The number of bytes to receive. A bitwise combination of the **System.Net.Sockets.SocketFlags** values.

ReceiveFrom

```
[C#] public int ReceiveFrom(byte[] buffer, ref EndPoint remoteEP);  
[C++] public: int ReceiveFrom(unsigned char buffer __gc[], EndPoint**  
remoteEP);  
[VB] Public Function ReceiveFrom(ByVal buffer() As Byte, ByRef remoteEP As  
EndPoint) As Integer  
[JScript] public function ReceiveFrom(buffer : Byte[], remoteEP : EndPoint) : int;
```

Description

Receives a datagram into a specific location in the data buffer and stores the endpoint.

Return Value: The number of bytes received. Storage location for received data.

An **System.Net.EndPoint**, passed by reference, that represents the remote server.

ReceiveFrom

```
[C#] public int ReceiveFrom(byte[] buffer, SocketFlags socketFlags, ref EndPoint  
remoteEP);  
[C++] public: int ReceiveFrom(unsigned char buffer __gc[], SocketFlags  
socketFlags, EndPoint** remoteEP);  
[VB] Public Function ReceiveFrom(ByVal buffer() As Byte, ByVal socketFlags  
As SocketFlags, ByRef remoteEP As EndPoint) As Integer  
[JScript] public function ReceiveFrom(buffer : Byte[], socketFlags : SocketFlags,  
remoteEP : EndPoint) : int;
```

1
2 *Description*

3 Receives a datagram into a specific location in the data buffer and stores the
4 endpoint.

5 *Return Value:* The number of bytes received. Storage location for received data. A
6 bitwise combination of the **System.Net.Sockets.SocketFlags** values. An
7 **System.Net.EndPoint**, passed by reference, that represents the remote server.

8 ReceiveFrom

9
10 [C#] public int ReceiveFrom(byte[] buffer, int size, SocketFlags socketFlags, ref
11 EndPoint remoteEP);

12 [C++] public: int ReceiveFrom(unsigned char buffer __gc[], int size, SocketFlags
13 socketFlags, EndPoint** remoteEP);

14 [VB] Public Function ReceiveFrom(ByVal buffer() As Byte, ByVal size As
15 Integer, ByVal socketFlags As SocketFlags, ByRef remoteEP As EndPoint) As
16 Integer

17 [JScript] public function ReceiveFrom(buffer : Byte[], size : int, socketFlags :
18 SocketFlags, remoteEP : EndPoint) : int;

19
20 *Description*

21 Receives a datagram into a specific location in the data buffer and stores the
22 endpoint.

23 *Return Value:* The number of bytes received. Storage location for received data.

24 The number of bytes to receive. A bitwise combination of the
25

System.Net.Sockets.SocketFlags values. An **System.Net.EndPoint**, passed by reference, that represents the remote server.

ReceiveFrom

[C#] public int ReceiveFrom(byte[] buffer, int offset, int size, SocketFlags socketFlags, ref EndPoint remoteEP);

[C++] public: int ReceiveFrom(unsigned char buffer __gc[], int offset, int size, SocketFlags socketFlags, EndPoint** remoteEP);

[VB] Public Function ReceiveFrom(ByVal buffer() As Byte, ByVal offset As Integer, ByVal size As Integer, ByVal socketFlags As SocketFlags, ByRef remoteEP As EndPoint) As Integer

[JScript] public function ReceiveFrom(buffer : Byte[], offset : int, size : int, socketFlags : SocketFlags, remoteEP : EndPoint) : int; Receives a datagram and stores the source endpoint.

Description

Receives a datagram into a specific location in the data buffer and stores the endpoint.

Return Value: The number of bytes received. Storage location for received data. The position in *buffer* to store the received data. The number of bytes to receive. A bitwise combination of the **System.Net.Sockets.SocketFlags** values. An **System.Net.EndPoint**, passed by reference, that represents the remote server.

Select

[C#] public static void Select(ICollection checkRead, ICollection checkWrite, ICollection checkError,

1 int microseconds);

2 [C++] public: static void Select(IList* checkRead, IList* checkWrite, IList*
3 checkError, int microseconds);

4 [VB] Public Shared Sub Select(ByVal checkRead As IList, ByVal checkWrite As
5 IList, ByVal checkError As IList, ByVal microseconds As Integer)

6 [JScript] public static function Select(checkRead : IList, checkWrite : IList,
7 checkError : IList, microseconds : int);

8 9 *Description*

10 Determines the status of a socket.

11 **System.Net.Sockets.Socket.Select(System.Collections.IList, System.Coll**
12 **ections.IList, System.Collections.IList, System.Int32)** is a static method that
13 determines the status of a set of **System.Net.Sockets.Socket** instances. For
14 example, to determine which of a set of **System.Net.Sockets.Socket** instances has
15 data ready to be read, place the **System.Net.Sockets.Socket** in an
16 **System.Collections.IList** instance, and then call
17 **System.Net.Sockets.Socket.Select(System.Collections.IList, System.Collections**
18 **.IList, System.Collections.IList, System.Int32)** . After the call to
19 **System.Net.Sockets.Socket.Select(System.Collections.IList, System.Collections**
20 **.IList, System.Collections.IList, System.Int32)** , the **System.Collections.IList**
21 will contain only those **System.Net.Sockets.Socket** instances with data ready to
22 be read. A list of **System.Net.Sockets.Socket** instances to check for data to read.
23 A list of **System.Net.Sockets.Socket** instances to check that are available for
24 writing. A list of **System.Net.Sockets.Socket** instances to check for errors. The
25 time to wait for a response, in microseconds.

Send

```
[C#] public int Send(byte[] buffer);  
[C++] public: int Send(unsigned char buffer __gc[]);  
[VB] Public Function Send(ByVal buffer() As Byte) As Integer  
[JScript] public function Send(buffer : Byte[]) : int;
```

Description

Sends data to a connected socket, starting at the indicated location in the data.

Return Value: The number of bytes sent to the socket. The data to be sent.

Send

```
[C#] public int Send(byte[] buffer, SocketFlags socketFlags);  
[C++] public: int Send(unsigned char buffer __gc[], SocketFlags socketFlags);  
[VB] Public Function Send(ByVal buffer() As Byte, ByVal socketFlags As  
SocketFlags) As Integer  
[JScript] public function Send(buffer : Byte[], socketFlags : SocketFlags) : int;
```

Description

Sends data to a connected socket, starting at the indicated location in the data.

Return Value: The number of bytes sent to the socket. The data to be sent. A bitwise combination of the **System.Net.Sockets.SocketFlags** values.

Send

```

1
2 [C#] public int Send(byte[] buffer, int size, SocketFlags socketFlags);
3 [C++] public: int Send(unsigned char buffer __gc[], int size, SocketFlags
4 socketFlags);
5 [VB] Public Function Send(ByteVal buffer() As Byte, ByteVal size As Integer, ByteVal
6 socketFlags As SocketFlags) As Integer
7 [JScript] public function Send(buffer : Byte[], size : int, socketFlags :
8 SocketFlags) : int; Sends data to a connected socket.
9

```

Description

Sends data to a connected socket, starting at the indicated location in the data.

Return Value: The number of bytes sent to the socket. The data to be sent. The number of bytes to send. A bitwise combination of the **System.Net.Sockets.SocketFlags** values.

Send

```

17
18 [C#] public int Send(byte[] buffer, int offset, int size, SocketFlags socketFlags);
19 [C++] public: int Send(unsigned char buffer __gc[], int offset, int size,
20 SocketFlags socketFlags);
21 [VB] Public Function Send(ByteVal buffer() As Byte, ByteVal offset As Integer,
22 ByteVal size As Integer, ByteVal socketFlags As SocketFlags) As Integer
23 [JScript] public function Send(buffer : Byte[], offset : int, size : int, socketFlags :
24 SocketFlags) : int;
25

```


Description

Sends data to a connected socket, starting at the indicated location in the data.

Return Value: The number of bytes sent to the socket. The data to be sent. The position in the data buffer to begin sending data. The number of bytes to send. A bitwise combination of the **System.Net.Sockets.SocketFlags** values.

SendTo

```
[C#] public int SendTo(byte[] buffer, EndPoint remoteEP);
```

```
[C++] public: int SendTo(unsigned char buffer __gc[], EndPoint* remoteEP);
```

```
[VB] Public Function SendTo(ByVal buffer() As Byte, ByVal remoteEP As EndPoint) As Integer
```

```
[JScript] public function SendTo(buffer : Byte[], remoteEP : EndPoint) : int;
```

Description

Sends data to a specific endpoint.

Return Value: The number of bytes sent. The data to be sent. The destination location for the data.

SendTo

```
[C#] public int SendTo(byte[] buffer, SocketFlags socketFlags, EndPoint remoteEP);
```

```
[C++] public: int SendTo(unsigned char buffer __gc[], SocketFlags socketFlags, EndPoint* remoteEP);
```

```

1 [VB] Public Function SendTo(ByVal buffer() As Byte, ByVal socketFlags As
2 SocketFlags, ByVal remoteEP As EndPoint) As Integer
3 [JScript] public function SendTo(buffer : Byte[], socketFlags : SocketFlags,
4 remoteEP : EndPoint) : int;

```

Description

Sends data to a specific endpoint.

Return Value: The number of bytes sent. The data to be sent. A bitwise combination of the **System.Net.Sockets.SocketFlags** values. The destination location for the data.

SendTo

```

13 [C#] public int SendTo(byte[] buffer, int size, SocketFlags socketFlags, EndPoint
14 remoteEP);

```

```

15 [C++] public: int SendTo(unsigned char buffer __gc[], int size, SocketFlags
16 socketFlags, EndPoint* remoteEP);

```

```

17 [VB] Public Function SendTo(ByVal buffer() As Byte, ByVal size As Integer,
18 ByVal socketFlags As SocketFlags, ByVal remoteEP As EndPoint) As Integer

```

```

19 [JScript] public function SendTo(buffer : Byte[], size : int, socketFlags :
20 SocketFlags, remoteEP : EndPoint) : int;

```

Description

Sends data to a specific endpoint.

Return Value: The number of bytes sent. The data to be sent. The number of bytes

1 to send. A bitwise combination of the **System.Net.Sockets.SocketFlags** values.

2 The destination location for the data.

3 SendTo

4
5 [C#] public int SendTo(byte[] buffer, int offset, int size, SocketFlags socketFlags,
6 EndPoint remoteEP);

7 [C++] public: int SendTo(unsigned char buffer __gc[], int offset, int size,
8 SocketFlags socketFlags, EndPoint* remoteEP);

9 [VB] Public Function SendTo(ByVal buffer() As Byte, ByVal offset As Integer,
10 ByVal size As Integer, ByVal socketFlags As SocketFlags, ByVal remoteEP As
11 EndPoint) As Integer

12 [JScript] public function SendTo(buffer : Byte[], offset : int, size : int, socketFlags
13 : SocketFlags, remoteEP : EndPoint) : int; Sends data to a specific endpoint.

15 Description

16 Sends data to a specific endpoint, starting at the indicated location in the
17 data.

18 *Return Value:* The number of bytes sent. The data to be sent. The position in the
19 data buffer to begin sending data. The number of bytes to send. A bitwise
20 combination of the **System.Net.Sockets.SocketFlags** values. The destination
21 location for the data.

22 SetSocketOption

23
24 [C#] public void SetSocketOption(SocketOptionLevel optionLevel,
25 SocketOptionName optionName, byte[] optionValue);

```

1 [C++] public: void SetSocketOption(SocketOptionLevel optionLevel,
2 SocketOptionName optionName, unsigned char optionValue __gc[]);
3 [VB] Public Sub SetSocketOption(ByVal optionLevel As SocketOptionLevel,
4 ByVal optionName As SocketOptionName, ByVal optionValue() As Byte)
5 [JScript] public function SetSocketOption(optionLevel : SocketOptionLevel,
6 optionName : SocketOptionName, optionValue : Byte[]);

```

Description

Sets the specified option to the specified value. One of the **System.Net.Sockets.SocketOptionLevel** values. One of the **System.Net.Sockets.SocketOptionName** values. The value of the option.

SetSocketOption

```

14 [C#] public void SetSocketOption(SocketOptionLevel optionLevel,
15 SocketOptionName optionName, int optionValue);
16 [C++] public: void SetSocketOption(SocketOptionLevel optionLevel,
17 SocketOptionName optionName, int optionValue);
18 [VB] Public Sub SetSocketOption(ByVal optionLevel As SocketOptionLevel,
19 ByVal optionName As SocketOptionName, ByVal optionValue As Integer)
20 [JScript] public function SetSocketOption(optionLevel : SocketOptionLevel,
21 optionName : SocketOptionName, optionValue : int); Sets a socket option.

```

Description

Sets the specified option to the specified value. One of the **System.Net.Sockets.SocketOptionLevel** values. One of the **System.Net.Sockets.SocketOptionName** values. The value of the option.

SetSocketOption

[C#] public void SetSocketOption(SocketOptionLevel optionLevel, SocketOptionName optionName, object optionValue);
[C++] public: void SetSocketOption(SocketOptionLevel optionLevel, SocketOptionName optionName, Object* optionValue);
[VB] Public Sub SetSocketOption(ByVal optionLevel As SocketOptionLevel, ByVal optionName As SocketOptionName, ByVal optionValue As Object)
[JScript] public function SetSocketOption(optionLevel : SocketOptionLevel, optionName : SocketOptionName, optionValue : Object);

Description

Sets the specified option to the specified value. One of the **System.Net.Sockets.SocketOptionLevel** values. One of the **System.Net.Sockets.SocketOptionName** values. An instance of **System.Net.Sockets.LingerOption** or **System.Net.Sockets.MulticastOption** containing the value of the option.

Shutdown

[C#] public void Shutdown(SocketShutdown how);
[C++] public: void Shutdown(SocketShutdown how);
[VB] Public Sub Shutdown(ByVal how As SocketShutdown)

1 [JScript] public function Shutdown(how : SocketShutdown);

2
3 *Description*

4 Disables sends and receives on a socket.

5 The **System.Net.Sockets.SocketShutdown** class contains the valid values
6 for *how* . The valid values are: Value Description Send Disable sending on this
7 socket. The function that will no longer be allowed.

8 IDisposable.Dispose

9
10 [C#] void IDisposable.Dispose();

11 [C++] void IDisposable::Dispose();

12 [VB] Sub Dispose() Implements IDisposable.Dispose

13 [JScript] function IDisposable.Dispose();

14 SocketException class (System.Net.Sockets)

15 ToString

16
17
18 *Description*

19 The exception that is thrown when a socket error occurs.

20 A **System.Net.Sockets.SocketException** is thrown by the
21 **System.Net.Sockets.Socket** and **System.Net.Dns** classes when an error occurs
22 with the network.

23 SocketException

24 *Example Syntax:*

25 ToString

[C#] public SocketException();

[C++] public: SocketException();

[VB] Public Sub New()

[JScript] public function SocketException(); Initializes a new instance of the **System.Net.Sockets.SocketException** class.

Description

Initializes a new instance of the **System.Net.Sockets.SocketException** class with the last operating system error code.

The **System.Net.Sockets.SocketException.#ctor** constructor sets the **System.Net.Sockets.SocketException.ErrorCode** property to the last operating system socket error that occurred. For more information about socket error codes, see the Windows Socket Version 2 API error code documentation in MSDN.

SocketException

Example Syntax:

ToString

[C#] public SocketException(int errorCode);

[C++] public: SocketException(int errorCode);

[VB] Public Sub New(ByVal errorCode As Integer)

[JScript] public function SocketException(errorCode : int);

Description

1 Initializes a new instance of the **System.Net.Sockets.SocketException**
2 class with the specified error code.

3 The **System.Net.Sockets.SocketException.#ctor** constructor sets the
4 **System.Net.Sockets.SocketException.ErrorCode** property to *errorCode* . The
5 error code indicating the error that occurred.

6 SocketException

7 *Example Syntax:*

8 ToString

9
10 [C#] protected SocketException(SerializationInfo serializationInfo,
11 StreamingContext streamingContext);

12 [C++] protected: SocketException(SerializationInfo* serializationInfo,
13 StreamingContext streamingContext);

14 [VB] Protected Sub New(ByVal serializationInfo As SerializationInfo, ByVal
15 streamingContext As StreamingContext)

16 [JScript] protected function SocketException(serializationInfo : SerializationInfo,
17 streamingContext : StreamingContext);

18 19 *Description*

20 Initializes a new instance of the **System.Net.Sockets.SocketException**
21 class from the specified instances of the
22 **System.Runtime.Serialization.SerializationInfo** and
23 **System.Runtime.Serialization.StreamingContext** classes.

24 This constructor implements the
25 **System.Runtime.Serialization.ISerializable** interface for the

1 **System.Net.Sockets.SocketException** class. A

2 **System.Runtime.Serialization.SerializationInfo** instance containing the
3 information required to serialize the new **System.Net.Sockets.SocketException**
4 instance. A **System.Runtime.Serialization.StreamingContext** containing the
5 source of the serialized stream associated with the new
6 **System.Net.Sockets.SocketException** instance.

7 **ErrorCode**

8 **ToString**

9
10 [C#] public override int **ErrorCode** {get;}

11 [C++] public: __property virtual int get_**ErrorCode**();

12 [VB] Overrides Public ReadOnly Property **ErrorCode** As Integer

13 [JScript] public function get **ErrorCode**() : int;

14
15 *Description*

16 Gets the error code associated with this exception.

17 The **System.Net.Sockets.SocketException.ErrorCode** property contains
18 the error code associated with the error that caused the exception.

19 **HelpLink**

20 **HResult**

21 **InnerException**

22 **Message**

23 **NativeErrorCode**

24 **Source**

25 **StackTrace**

1 TargetSite

2 SocketFlags enumeration (System.Net.Sockets)

3 ToString

4
5
6 *Description*

7 Provides constant values for socket messages.

8 ToString

9
10 [C#] public const SocketFlags DontRoute;

11 [C++] public: const SocketFlags DontRoute;

12 [VB] Public Const DontRoute As SocketFlags

13 [JScript] public var DontRoute : SocketFlags;

14
15 *Description*

16 Send without using routing tables.

17 ToString

18
19 [C#] public const SocketFlags MaxIOVectorLength;

20 [C++] public: const SocketFlags MaxIOVectorLength;

21 [VB] Public Const MaxIOVectorLength As SocketFlags

22 [JScript] public var MaxIOVectorLength : SocketFlags;

23
24 *Description*

Provides a standard value for the number of WSABUF structures used to send and receive data.

ToString

[C#] public const SocketFlags None;

[C++] public: const SocketFlags None;

[VB] Public Const None As SocketFlags

[JScript] public var None : SocketFlags;

Description

Use no flags for this call.

ToString

[C#] public const SocketFlags OutOfBand;

[C++] public: const SocketFlags OutOfBand;

[VB] Public Const OutOfBand As SocketFlags

[JScript] public var OutOfBand : SocketFlags;

Description

Process out-of-band data.

ToString

[C#] public const SocketFlags Partial;

[C++] public: const SocketFlags Partial;

[VB] Public Const Partial As SocketFlags

1 [JScript] public var Partial : SocketFlags;

3 *Description*

4 Partial send or receive for message.

5 ToString

7 [C#] public const SocketFlags Peek;

8 [C++] public: const SocketFlags Peek;

9 [VB] Public Const Peek As SocketFlags

10 [JScript] public var Peek : SocketFlags;

12 *Description*

13 Peek at incoming message.

14 SocketOptionLevel enumeration (System.Net.Sockets)

15 ToString

18 *Description*

19 Defines socket option levels for the

20 **System.Net.Sockets.Socket.SetSocketOption(System.Net.Sockets.SocketOptio**

21 **nLevel,System.Net.Sockets.SocketOptionName,System.Int32)** and

22 **System.Net.Sockets.Socket.GetSocketOption(System.Net.Sockets.SocketOptio**

23 **nLevel,System.Net.Sockets.SocketOptionName)** methods.

24 The **System.Net.Sockets.SocketOptionLevel** enumeration defines the
25 socket option levels that can be passed to the

1 **System.Net.Sockets.Socket.SetSocketOption(System.Net.Sockets.SocketOptio**
2 **nLevel,System.Net.Sockets.SocketOptionName,System.Int32) and**
3 **System.Net.Sockets.Socket.GetSocketOption(System.Net.Sockets.SocketOptio**
4 **nLevel,System.Net.Sockets.SocketOptionName) methods.**

5 ToString

6
7 [C#] public const SocketOptionLevel IP;

8 [C++] public: const SocketOptionLevel IP;

9 [VB] Public Const IP As SocketOptionLevel

10 [JScript] public var IP : SocketOptionLevel;

11
12 *Description*

13 Socket options apply to IP sockets.

14 ToString

15
16 [C#] public const SocketOptionLevel Socket;

17 [C++] public: const SocketOptionLevel Socket;

18 [VB] Public Const Socket As SocketOptionLevel

19 [JScript] public var Socket : SocketOptionLevel;

20
21 *Description*

22 Socket options apply to the socket itself.

23 ToString

24
25 [C#] public const SocketOptionLevel Tcp;

1 [C++] public: const SocketOptionLevel Tcp;

2 [VB] Public Const Tcp As SocketOptionLevel

3 [JScript] public var Tcp : SocketOptionLevel;

4
5 *Description*

6 Socket options apply to TCP sockets.

7 ToString

8
9 [C#] public const SocketOptionLevel Udp;

10 [C++] public: const SocketOptionLevel Udp;

11 [VB] Public Const Udp As SocketOptionLevel

12 [JScript] public var Udp : SocketOptionLevel;

13
14 *Description*

15 Socket options apply to UDP sockets.

16 SocketOptionName enumeration (System.Net.Sockets)

17 ToString

18
19
20 *Description*

21 Defines socket option names for the **System.Net.Sockets.Socket** class.

22 ToString

23
24 [C#] public const SocketOptionName AcceptConnection;

25 [C++] public: const SocketOptionName AcceptConnection;

1 [VB] Public Const AcceptConnection As SocketOptionName

2 [JScript] public var AcceptConnection : SocketOptionName;

3
4 *Description*

5 Socket is listening.

6 ToString

7
8 [C#] public const SocketOptionName AddMembership;

9 [C++] public: const SocketOptionName AddMembership;

10 [VB] Public Const AddMembership As SocketOptionName

11 [JScript] public var AddMembership : SocketOptionName;

12
13 *Description*

14 Add an IP group membership.

15 ToString

16
17 [C#] public const SocketOptionName AddSourceMembership;

18 [C++] public: const SocketOptionName AddSourceMembership;

19 [VB] Public Const AddSourceMembership As SocketOptionName

20 [JScript] public var AddSourceMembership : SocketOptionName;

21
22 *Description*

23 Join a source group.

24 ToString

1
2 [C#] public const SocketOptionName BlockSource;
3 [C++] public: const SocketOptionName BlockSource;
4 [VB] Public Const BlockSource As SocketOptionName
5 [JScript] public var BlockSource : SocketOptionName;

6
7 *Description*

8 Block data from a source.

9 ToString

10
11 [C#] public const SocketOptionName Broadcast;
12 [C++] public: const SocketOptionName Broadcast;
13 [VB] Public Const Broadcast As SocketOptionName
14 [JScript] public var Broadcast : SocketOptionName;

15
16 *Description*

17 Permit sending broadcast messages on the socket.

18 ToString

19
20 [C#] public const SocketOptionName BsdUrgent;
21 [C++] public: const SocketOptionName BsdUrgent;
22 [VB] Public Const BsdUrgent As SocketOptionName
23 [JScript] public var BsdUrgent : SocketOptionName;

24
25 *Description*

1 Use urgent data as defined in RFC-1222. This option can be set only once,
2 and once set, cannot be turned off.

3 ToString

4
5 [C#] public const SocketOptionName ChecksumCoverage;

6 [C++] public: const SocketOptionName ChecksumCoverage;

7 [VB] Public Const ChecksumCoverage As SocketOptionName

8 [JScript] public var ChecksumCoverage : SocketOptionName;

9
10 *Description*

11 Set or get UDP checksum coverage.

12 ToString

13
14 [C#] public const SocketOptionName Debug;

15 [C++] public: const SocketOptionName Debug;

16 [VB] Public Const Debug As SocketOptionName

17 [JScript] public var Debug : SocketOptionName;

18
19 *Description*

20 Record debugging information.

21 ToString

22
23 [C#] public const SocketOptionName DontFragment;

24 [C++] public: const SocketOptionName DontFragment;

25 [VB] Public Const DontFragment As SocketOptionName

1 [JScript] public var DontFragment : SocketOptionName;

3 *Description*

4 Do not fragment IP datagrams.

5 ToString

7 [C#] public const SocketOptionName DontLinger;

8 [C++] public: const SocketOptionName DontLinger;

9 [VB] Public Const DontLinger As SocketOptionName

10 [JScript] public var DontLinger : SocketOptionName;

12 *Description*

13 Close socket gracefully without lingering.

14 ToString

16 [C#] public const SocketOptionName DontRoute;

17 [C++] public: const SocketOptionName DontRoute;

18 [VB] Public Const DontRoute As SocketOptionName

19 [JScript] public var DontRoute : SocketOptionName;

21 *Description*

22 Do not route; send directly to interface addresses.

23 ToString

25 [C#] public const SocketOptionName DropMembership;

1 [C++] public: const SocketOptionName DropMembership;
2 [VB] Public Const DropMembership As SocketOptionName
3 [JScript] public var DropMembership : SocketOptionName;

4
5 *Description*

6 Drop an IP group membership.

7 ToString

8
9 [C#] public const SocketOptionName DropSourceMembership;
10 [C++] public: const SocketOptionName DropSourceMembership;
11 [VB] Public Const DropSourceMembership As SocketOptionName
12 [JScript] public var DropSourceMembership : SocketOptionName;

13
14 *Description*

15 Drop a source group.

16 ToString

17
18 [C#] public const SocketOptionName Error;
19 [C++] public: const SocketOptionName Error;
20 [VB] Public Const Error As SocketOptionName
21 [JScript] public var Error : SocketOptionName;

22
23 *Description*

24 Get error status and clear.

25 ToString

```

1
2 [C#] public const SocketOptionName ExclusiveAddressUse;
3 [C++] public: const SocketOptionName ExclusiveAddressUse;
4 [VB] Public Const ExclusiveAddressUse As SocketOptionName
5 [JScript] public var ExclusiveAddressUse : SocketOptionName;
6

```

Description

Enables a socket to be bound for exclusive access.

ToString

```

10
11 [C#] public const SocketOptionName Expedited;
12 [C++] public: const SocketOptionName Expedited;
13 [VB] Public Const Expedited As SocketOptionName
14 [JScript] public var Expedited : SocketOptionName;
15

```

Description

Use expedited data as defined in RFC-1222. This option can be set only once, and once set, cannot be turned off.

ToString

```

20
21 [C#] public const SocketOptionName HeaderIncluded;
22 [C++] public: const SocketOptionName HeaderIncluded;
23 [VB] Public Const HeaderIncluded As SocketOptionName
24 [JScript] public var HeaderIncluded : SocketOptionName;
25

```

1
2 *Description*

3 Indicates application is providing the IP header for outgoing datagrams.

4 ToString

5
6 [C#] public const SocketOptionName IPOptions;

7 [C++] public: const SocketOptionName IPOptions;

8 [VB] Public Const IPOptions As SocketOptionName

9 [JScript] public var IPOptions : SocketOptionName;

10
11 *Description*

12 Specifies IP options to be inserted into outgoing datagrams.

13 ToString

14
15 [C#] public const SocketOptionName IpTimeToLive;

16 [C++] public: const SocketOptionName IpTimeToLive;

17 [VB] Public Const IpTimeToLive As SocketOptionName

18 [JScript] public var IpTimeToLive : SocketOptionName;

19
20 *Description*

21 Set the IP header time-to-live field.

22 ToString

23
24 [C#] public const SocketOptionName KeepAlive;

25 [C++] public: const SocketOptionName KeepAlive;

[VB] Public Const KeepAlive As SocketOptionName

[JScript] public var KeepAlive : SocketOptionName;

Description

Send keep-alives.

ToString

[C#] public const SocketOptionName Linger;

[C++] public: const SocketOptionName Linger;

[VB] Public Const Linger As SocketOptionName

[JScript] public var Linger : SocketOptionName;

Description

Linger on close if unsent data is present.

ToString

[C#] public const SocketOptionName MaxConnections;

[C++] public: const SocketOptionName MaxConnections;

[VB] Public Const MaxConnections As SocketOptionName

[JScript] public var MaxConnections : SocketOptionName;

Description

Maximum queue length that can be specified by

System.Net.Sockets.Socket.Listen(System.Int32) .

ToString

```

1
2 [C#] public const SocketOptionName MulticastInterface;
3 [C++] public: const SocketOptionName MulticastInterface;
4 [VB] Public Const MulticastInterface As SocketOptionName
5 [JScript] public var MulticastInterface : SocketOptionName;
6

```

Description

Set the interface for outgoing multicast packets.

ToString

```

11 [C#] public const SocketOptionName MulticastLoopback;
12 [C++] public: const SocketOptionName MulticastLoopback;
13 [VB] Public Const MulticastLoopback As SocketOptionName
14 [JScript] public var MulticastLoopback : SocketOptionName;
15

```

Description

IP multicast loopback.

ToString

```

20 [C#] public const SocketOptionName MulticastTimeToLive;
21 [C++] public: const SocketOptionName MulticastTimeToLive;
22 [VB] Public Const MulticastTimeToLive As SocketOptionName
23 [JScript] public var MulticastTimeToLive : SocketOptionName;
24

```

Description

IP multicast time to live.

ToString

[C#] public const SocketOptionName NoChecksum;

[C++] public: const SocketOptionName NoChecksum;

[VB] Public Const NoChecksum As SocketOptionName

[JScript] public var NoChecksum : SocketOptionName;

Description

Send UDP datagrams with checksum set to zero.

ToString

[C#] public const SocketOptionName NoDelay;

[C++] public: const SocketOptionName NoDelay;

[VB] Public Const NoDelay As SocketOptionName

[JScript] public var NoDelay : SocketOptionName;

Description

Disables the Nagle algorithm for send coalescing.

ToString

[C#] public const SocketOptionName OutOfBandInline;

[C++] public: const SocketOptionName OutOfBandInline;

[VB] Public Const OutOfBandInline As SocketOptionName

[JScript] public var OutOfBandInline : SocketOptionName;

1
2 *Description*

3 Receives out-of-band data in the normal data stream.

4 ToString

5
6 [C#] public const SocketOptionName PacketInformation;

7 [C++] public: const SocketOptionName PacketInformation;

8 [VB] Public Const PacketInformation As SocketOptionName

9 [JScript] public var PacketInformation : SocketOptionName;

10
11 *Description*

12 Return information about received packets.

13 ToString

14
15 [C#] public const SocketOptionName ReceiveBuffer;

16 [C++] public: const SocketOptionName ReceiveBuffer;

17 [VB] Public Const ReceiveBuffer As SocketOptionName

18 [JScript] public var ReceiveBuffer : SocketOptionName;

19
20 *Description*

21 Send low water mark.

22 ToString

23
24 [C#] public const SocketOptionName ReceiveLowWater;

25 [C++] public: const SocketOptionName ReceiveLowWater;

1 [VB] Public Const ReceiveLowWater As SocketOptionName

2 [JScript] public var ReceiveLowWater : SocketOptionName;

4 *Description*

5 Receive low water mark.

6 ToString

8 [C#] public const SocketOptionName ReceiveTimeout;

9 [C++] public: const SocketOptionName ReceiveTimeout;

10 [VB] Public Const ReceiveTimeout As SocketOptionName

11 [JScript] public var ReceiveTimeout : SocketOptionName;

13 *Description*

14 Receive time out.

15 ToString

17 [C#] public const SocketOptionName ReuseAddress;

18 [C++] public: const SocketOptionName ReuseAddress;

19 [VB] Public Const ReuseAddress As SocketOptionName

20 [JScript] public var ReuseAddress : SocketOptionName;

22 *Description*

23 Allows the socket to be bound to an address that is already in use.

24 ToString

1
2 [C#] public const SocketOptionName SendBuffer;
3 [C++] public: const SocketOptionName SendBuffer;
4 [VB] Public Const SendBuffer As SocketOptionName
5 [JScript] public var SendBuffer : SocketOptionName;
6

7 *Description*

8 Specifies the total per-socket buffer space reserved for sends. This is
9 unrelated to the maximum message size or the size of a TCP window.

10 ToString
11

12 [C#] public const SocketOptionName SendLowWater;
13 [C++] public: const SocketOptionName SendLowWater;
14 [VB] Public Const SendLowWater As SocketOptionName
15 [JScript] public var SendLowWater : SocketOptionName;
16

17 *Description*

18 Specifies the total per-socket buffer space reserved for receives. This is
19 unrelated to the maximum message size or the size of a TCP window.

20 ToString
21

22 [C#] public const SocketOptionName SendTimeout;
23 [C++] public: const SocketOptionName SendTimeout;
24 [VB] Public Const SendTimeout As SocketOptionName
25 [JScript] public var SendTimeout : SocketOptionName;

1
2 *Description*

3 Send timeout.

4 ToString

5
6 [C#] public const SocketOptionName Type;

7 [C++] public: const SocketOptionName Type;

8 [VB] Public Const Type As SocketOptionName

9 [JScript] public var Type : SocketOptionName;

10
11 *Description*

12 Get socket type.

13 ToString

14
15 [C#] public const SocketOptionName TypeOfService;

16 [C++] public: const SocketOptionName TypeOfService;

17 [VB] Public Const TypeOfService As SocketOptionName

18 [JScript] public var TypeOfService : SocketOptionName;

19
20 *Description*

21 Change the IP header type of service field.

22 ToString

23
24 [C#] public const SocketOptionName UnblockSource;

25 [C++] public: const SocketOptionName UnblockSource;

1 [VB] Public Const UnblockSource As SocketOptionName

2 [JScript] public var UnblockSource : SocketOptionName;

3
4 *Description*

5 Unblock a previously blocked source.

6 ToString

7
8 [C#] public const SocketOptionName UseLoopback;

9 [C++] public: const SocketOptionName UseLoopback;

10 [VB] Public Const UseLoopback As SocketOptionName

11 [JScript] public var UseLoopback : SocketOptionName;

12
13 *Description*

14 Bypass hardware when possible.

15 SocketShutdown enumeration (System.Net.Sockets)

16 ToString

17
18
19 *Description*

20 Defines constants used by the

21 **System.Net.Sockets.Socket.Shutdown(System.Net.Sockets.SocketShutdown)**

22 method.

23 The **System.Net.Sockets.SocketShutdown** class is a helper class that
24 defines the values that can be passed to the

1 **System.Net.Sockets.Socket.Shutdown(System.Net.Sockets.SocketShutdown)**

2 method.

3 ToString

4
5 [C#] public const SocketShutdown Both;

6 [C++] public: const SocketShutdown Both;

7 [VB] Public Const Both As SocketShutdown

8 [JScript] public var Both : SocketShutdown;

9
10 *Description*

11 Shuts down a socket for both sending and receiving. This field is constant.

12 ToString

13
14 [C#] public const SocketShutdown Receive;

15 [C++] public: const SocketShutdown Receive;

16 [VB] Public Const Receive As SocketShutdown

17 [JScript] public var Receive : SocketShutdown;

18
19 *Description*

20 Shuts down a socket for receiving. This field is constant.

21 ToString

22
23 [C#] public const SocketShutdown Send;

24 [C++] public: const SocketShutdown Send;

25 [VB] Public Const Send As SocketShutdown

1 [JScript] public var Send : SocketShutdown;

3 *Description*

4 Shuts down a socket for sending. This field is constant.

5 SocketType enumeration (System.Net.Sockets)

6 ToString

9 *Description*

10 Specifies the type of socket an instance of the **System.Net.Sockets.Socket**
11 class represents.

12 ToString

14 [C#] public const SocketType Dgram;

15 [C++] public: const SocketType Dgram;

16 [VB] Public Const Dgram As SocketType

17 [JScript] public var Dgram : SocketType;

19 *Description*

21 ToString

23 [C#] public const SocketType Raw;

24 [C++] public: const SocketType Raw;

25 [VB] Public Const Raw As SocketType

[JScript] public var Raw : SocketType;

Description

ToString

[C#] public const SocketType Rdm;

[C++] public: const SocketType Rdm;

[VB] Public Const Rdm As SocketType

[JScript] public var Rdm : SocketType;

Description

ToString

[C#] public const SocketType Seqpacket;

[C++] public: const SocketType Seqpacket;

[VB] Public Const Seqpacket As SocketType

[JScript] public var Seqpacket : SocketType;

Description

ToString

[C#] public const SocketType Stream;

1 [C++] public: const SocketType Stream;

2 [VB] Public Const Stream As SocketType

3 [JScript] public var Stream : SocketType;

4
5 *Description*

6
7 ToString

8
9 [C#] public const SocketType Unknown;

10 [C++] public: const SocketType Unknown;

11 [VB] Public Const Unknown As SocketType

12 [JScript] public var Unknown : SocketType;

13
14 *Description*

15
16 TcpClient class (System.Net.Sockets)

17 ToString

18
19
20 *Description*

21 Provides client connections for TCP network services.

22 The **System.Net.Sockets.TcpClient** class builds upon the
23 **System.Net.Sockets.Socket** class to provide TCP services at a higher level of
24 abstraction. You can establish a **System.Net.Sockets.TcpClient** connection can be
25 establish by one of two ways.

TcpClient

Example Syntax:

ToString

[C#] public TcpClient();

[C++] public: TcpClient();

[VB] Public Sub New()

[JScript] public function TcpClient();

Description

Initializes a new instance of the **System.Net.Sockets.TcpClient** class.

The default constructor sets the IP address to **System.Net.IPAddress.Any** and the port number to 0.

TcpClient

Example Syntax:

ToString

[C#] public TcpClient(IPEndPoint localEP);

[C++] public: TcpClient(IPEndPoint* localEP);

[VB] Public Sub New(ByVal localEP As IPEndPoint)

[JScript] public function TcpClient(localEP : IPEndPoint); Initializes a new instance of the **System.Net.Sockets.TcpClient** class.

Description

1 Initializes a new instance of the **System.Net.Sockets.TcpClient** class with
2 the local endpoint.

3 The *localEP* parameter specifies the local endpoint. This constructor
4 instantiates a socket and binds that socket to the provided local endpoint. The local
5 endpoint to which you bind the TCP connection.

6 **TcpClient**

7 *Example Syntax:*

8 **ToString**

9
10 [C#] public TcpClient(string hostname, int port);

11 [C++] public: TcpClient(String* hostname, int port);

12 [VB] Public Sub New(ByVal hostname As String, ByVal port As Integer)

13 [JScript] public function TcpClient(hostname : String, port : int);

14
15 *Description*

16 Initializes a new instance of the **System.Net.Sockets.TcpClient** class and
17 connects to the specified port on the specified host.

18 This constructor accepts two parameters. Name of the remote host to which
19 you intend to connect. Port number of the remote host to which you intend to
20 connect.

21 **Active**

22 **ToString**

23
24 [C#] protected bool Active {get; set;}

25 [C++] protected: __property bool get_Active();protected: __property void

1 set_Active(bool);

2 [VB] Protected Property Active As Boolean

3 [JScript] protected function get Active() : Boolean;protected function set

4 Active(Boolean);

5
6 *Description*

7 Gets or set a value that indicates whether a connection has been made.

8 Client

9 ToString

10
11 [C#] protected Socket Client {get; set;}

12 [C++] protected: __property Socket* get_Client();protected: __property void

13 set_Client(Socket*);

14 [VB] Protected Property Client As Socket

15 [JScript] protected function get Client() : Socket;protected function set

16 Client(Socket);

17
18 *Description*

19 Gets or sets the underlying **System.Net.Sockets.Socket** instance.

20 Use this property to set or get the underlying **System.Net.Sockets.Socket**
21 instance of **System.Net.Sockets.TcpClient** .

22 LingerState

23 ToString

24
25 [C#] public LingerOption LingerState {get; set;}

```

1 [C++] public: __property LingerOption* get_LingerState();public: __property
2 void set_LingerState(LingerOption*);
3 [VB] Public Property LingerState As LingerOption
4 [JScript] public function get LingerState() : LingerOption;public function set
5 LingerState(LingerOption);
6

```

Description

Gets or sets the value of the connection's **System.Net.Sockets.LingerOption**. An instance of the **System.Net.Sockets.LingerOption** class.

This property sets or gets a **System.Net.Sockets.LingerOption** instance. If the **System.Net.Sockets.LingerOption.Enabled** property of the **System.Net.Sockets.LingerOption** instance is *true*, and data remains to be sent, then **System.Net.Sockets.TcpClient** remains open even after **System.Net.Sockets.TcpClient.Close** is called. The amount of time the object remains open is specified by the **System.Net.Sockets.LingerOption.LingerTime** property of the **System.Net.Sockets.LingerOption** instance. If the **Enabled** property of the **System.Net.Sockets.LingerOption** instance is *false*, then **System.Net.Sockets.TCPClient** will close immediately, even if data remains to be sent.

NoDelay

ToString

```

23
24 [C#] public bool NoDelay {get; set;}
25 [C++] public: __property bool get_NoDelay();public: __property void

```

1 set_NoDelay(bool);

2 [VB] Public Property NoDelay As Boolean

3 [JScript] public function get NoDelay() : Boolean;public function set

4 NoDelay(Boolean);

5
6 *Description*

7 Gets or sets a value that enables a delay when send or receive buffers are
8 full.

9 If **System.Net.Sockets.TcpClient.NoDelay** is set to *false* ,
10 **System.Net.Sockets.TcpClient** delays the sending and receiving of data while
11 buffers are full. If **System.Net.Sockets.TcpClient.NoDelay** is set to *true* , then
12 **System.Net.Sockets.TcpClient** continues writing to buffers even if there is no
13 capacity left.

14 ReceiveBufferSize

15 ToString

16
17 [C#] public int ReceiveBufferSize {get; set;}

18 [C++] public: __property int get_ReceiveBufferSize();public: __property void

19 set_ReceiveBufferSize(int);

20 [VB] Public Property ReceiveBufferSize As Integer

21 [JScript] public function get ReceiveBufferSize() : int;public function set

22 ReceiveBufferSize(int);

23
24 *Description*

25 Gets or sets the size of the receive buffer.

The **System.Net.Sockets.TcpClient.ReceiveBufferSize** property gets or sets the amount of bytes that can be stored in the receive buffer. After using **System.Net.Sockets.TcpClient.GetStream** to retrieve the underlying **System.Net.Sockets.NetworkStream** instance, you will initiate a read by using one of the **System.Net.Sockets.NetworkStream** read methods. The amount of data that can be stored from this read, will be determined by the **System.Net.Sockets.TcpClient.ReceiveBufferSize** property.

ReceiveTimeout

ToString

```
[C#] public int ReceiveTimeout {get; set;}
```

```
[C++] public: __property int get_ReceiveTimeout();public: __property void  
set_ReceiveTimeout(int);
```

```
[VB] Public Property ReceiveTimeout As Integer
```

```
[JScript] public function get ReceiveTimeout() : int;public function set  
ReceiveTimeout(int);
```

Description

Gets or sets the amount of time a **System.Net.Sockets.TcpClient** object will wait to receive data once a read is initiated.

The **System.Net.Sockets.TcpClient.ReceiveTimeout** property determines the amount of time a **System.Net.Sockets.TcpClient** object will wait to receive data after a read is initiated. This time is measured in milliseconds.

SendBufferSize

ToString

```

1
2 [C#] public int SendBufferSize {get; set;}
3 [C++] public: __property int get_SendBufferSize();public: __property void
4 set_SendBufferSize(int);
5 [VB] Public Property SendBufferSize As Integer
6 [JScript] public function get SendBufferSize() : int;public function set
7 SendBufferSize(int);
8

```

9 *Description*

10 Gets or sets the size of the send buffer.

11 The **System.Net.Sockets.TcpClient.SendBufferSize** property gets or sets
12 the amount of bytes that can be stored in the send buffer. After using
13 **System.Net.Sockets.TcpClient.GetStream** to retrieve the underlying
14 **System.Net.Sockets.NetworkStream** instance, you will initiate a send by using
15 one of the **System.Net.Sockets.NetworkStream** send methods. The amount of
16 data that can be sent for each send, will be determined by the
17 **System.Net.Sockets.TcpClient.SendBufferSize** property.

18 SendTimeout

19 ToString

```

20
21 [C#] public int SendTimeout {get; set;}
22 [C++] public: __property int get_SendTimeout();public: __property void
23 set_SendTimeout(int);
24 [VB] Public Property SendTimeout As Integer
25 [JScript] public function get SendTimeout() : int;public function set

```


1 SendTimeout(int);

2
3 *Description*

4 Gets or sets the amount of time a **System.Net.Sockets.TcpClient** object
5 will wait to receive confirmation you initiate a send.

6 After you initiate a send, the underlying **System.Net.Sockets.Socket**
7 instance returns the number of bytes actually sent to the host. The
8 **System.Net.Sockets.TcpClient.SendTimeout** property determines the amount of
9 time a **System.Net.Sockets.TcpClient** object will wait before receiving the
10 number of bytes returned by the **System.Net.Sockets.Socket** class.

11 Close

12
13 [C#] public void Close();

14 [C++] public: void Close();

15 [VB] Public Sub Close()

16 [JScript] public function Close();

17
18 *Description*

19 Closes the TCP connection.

20 Closes the TCP connection.

21 Connect

22
23 [C#] public void Connect(IPEndPoint remoteEP);

24 [C++] public: void Connect(IPEndPoint* remoteEP);

25 [VB] Public Sub Connect(ByVal remoteEP As IPEndPoint)

1 [JScript] public function Connect(remoteEP : IPEndPoint);

2
3 *Description*

4 Connects the client to a remote TCP host using the specified remote
5 network endpoint.

6 **System.Net.Sockets.TcpClient.Connect(System.String,System.Int32)**
7 establishes a TCP connection using the specified network endpoint. Before you
8 call **System.Net.Sockets.TcpClient.Connect(System.String,System.Int32)** , you
9 must first instantiate an **System.Net.IPEndPoint** object using an IP address and
10 port number. This is your network end-point. After you have instantiated the
11 **System.Net.Sockets.IPEndPoint** object, you can then call
12 **System.Net.Sockets.TcpClient.Connect(System.String,System.Int32)** and use
13 the **System.Net.IPEndPoint** object as its argument. The IP endpoint to which you
14 intend to connect.

15 **Connect**

16
17 [C#] public void Connect(IPAddress address, int port);

18 [C++] public: void Connect(IPAddress* address, int port);

19 [VB] Public Sub Connect(ByVal address As IPAddress, ByVal port As Integer)

20 [JScript] public function Connect(address : IPAddress, port : int);

21
22 *Description*

23 Connects the client to a remote TCP host using the specified IP Address
24 and port number.

System.Net.Sockets.TcpClient.Connect(System.String,System.Int32)

establishes a TCP connection using the specified port and IP address. This method establishes a connection by calling the **System.Net.Sockets.Socket.Connect(System.Net.EndPoint)** method of the underlying **System.Net.Sockets.Socket** instance. After the connection is established, you can use the underlying **System.Net.Sockets.NetworkStream** instance to send and receive data. Use **System.Net.Sockets.TcpClient.GetStream** to obtain the underlying **System.Net.Sockets.NetworkStream** instance. IP address of the host to which you intend to connect. The port number to which you intend to connect.

Connect

[C#] public void Connect(string hostname, int port);

[C++] public: void Connect(String* hostname, int port);

[VB] Public Sub Connect(ByVal hostname As String, ByVal port As Integer)

[JScript] public function Connect(hostname : String, port : int); Connects the client to a remote TCP host using the specified host name and port number.

Description

Connects the client to the specified port on the specified host.

System.Net.Sockets.TcpClient.Connect(System.String,System.Int32)

establishes a TCP connection to the host device using the specified *port* and *hostname* specified. This method establishes a connection by calling the **System.Net.Sockets.Socket.Connect(System.Net.EndPoint)** method of the underlying **System.Net.Sockets.Socket** instance. After the connection is

established, you can use the underlying **System.Net.Sockets.NetworkStream** instance to send and receive data. Use **System.Net.Sockets.TcpClient.GetStream** to obtain the underlying **System.Net.Sockets.NetworkStream** instance. Name of the remote host to which you intend to connect. Port number of the remote host to which you intend to connect.

Dispose

[C#] protected virtual void Dispose(bool disposing);

[C++] protected: virtual void Dispose(bool disposing);

[VB] Overridable Protected Sub Dispose(ByVal disposing As Boolean)

[JScript] protected function Dispose(disposing : Boolean);

Description

Releases the unmanaged resources used by the **System.Net.Sockets.TcpClient** and optionally releases the managed resources.

This method releases the underlying **System.Net.Sockets.NetworkStream** and **System.Net.Sockets.Socket** instances. There are no managed resources that require releasing. If you call **System.Net.Sockets.TcpClient.Dispose(System.Boolean)** and specify *true* as its parameter, then be sure to suppress the finalizer by calling the **System.Net.Sockets.TcpClient.suppressfinalize** method of the garbage collector. If **true**, releases both managed and unmanaged resources; if **false**, releases only unmanaged resources.

Finalize

1
2 [C#] ~TcpClient();

3 [C++] ~TcpClient();

4 [VB] Overrides Protected Sub Finalize()

5 [JScript] protected override function Finalize();

6
7 *Description*

8 Frees resources used by the **System.Net.Sockets.TcpClient** class.

9 The **System.Net.Sockets.TcpClient** class finalizer calls the
10 **System.Net.Sockets.TcpClient.Close** method to close the TCP connection, shut
11 down the network stream, and free the socket.

12 **GetStream**

13
14 [C#] public NetworkStream GetStream();

15 [C++] public: NetworkStream* GetStream();

16 [VB] Public Function GetStream() As NetworkStream

17 [JScript] public function GetStream() : NetworkStream;

18
19 *Description*

20 Returns the stream used to send and receive data.

21 *Return Value:* The underlying **System.Net.Sockets.NetworkStream** instance.

22 **System.Net.Sockets.TcpClient.GetStream** returns the underlying
23 **System.Net.Sockets.NetworkStream** used to send and receive data.

24 **IDisposable.Dispose**

[C#] void IDisposable.Dispose();
 [C++] void IDisposable::Dispose();
 [VB] Sub Dispose() Implements IDisposable.Dispose
 [JScript] function IDisposable.Dispose();

TcpListener class (System.Net.Sockets)

ToString

Description

Listens for connections from TCP network clients.

The **System.Net.Sockets.TcpListener** class builds upon the **System.Net.Sockets.Socket** class to provide TCP services at a higher level of abstraction.

TcpListener

Example Syntax:

ToString

[C#] public TcpListener(int port);
 [C++] public: TcpListener(int port);
 [VB] Public Sub New(ByVal port As Integer)
 [JScript] public function TcpListener(port : int);

Description

1 Initializes a new instance of the **System.Net.Sockets.TcpListener** that
2 listens on the specified port.

3 The *port* parameter specifies the local port number on which you intend to
4 listen. This constructor instantiates the underlying
5 **System.Net.Sockets.IPEndPoint** using the specified port number. When you call
6 **System.Net.Sockets.TcpListener.Start** , **System.Net.Sockets.TcpListener** uses
7 the default network interface to listen for connections on the specified port
8 number. The port on which to listen. If this number is 0, a port number will be
9 selected at random.

10 TcpListener

11 *Example Syntax:*

12 ToString

13
14 [C#] public TcpListener(IPEndPoint localEP);

15 [C++] public: TcpListener(IPEndPoint* localEP);

16 [VB] Public Sub New(ByVal localEP As IPEndPoint)

17 [JScript] public function TcpListener(localEP : IPEndPoint); Initializes a new
18 instance of the **System.Net.Sockets.TcpListener** class.

19
20 *Description*

21 Initializes a new instance of the **System.Net.Sockets.TcpListener** class
22 with the specified local endpoint.

23 The *localEP* parameter specifies the local endpoint. This constructor sets
24 the underlying **System.Net.Sockets.IPEndPoint** of
25 **System.Net.Sockets.TcpListener** to the specified local endpoint. If you call

System.Net.Sockets.TcpListener.Start , **System.Net.Sockets.TcpListener** will listen for connections using this endpoint. The localend point to bind the listener connection to.

TcpListener

Example Syntax:

ToString

[C#] public TcpListener(IPAddress localaddr, int port);

[C++] public: TcpListener(IPAddress* localaddr, int port);

[VB] Public Sub New(ByVal localaddr As IPAddress, ByVal port As Integer)

[JScript] public function TcpListener(localaddr : IPAddress, port : int);

Description

Initializes a new instance of the **System.Net.Sockets.TcpListener** class that listens to the specified IP address and port.

This constructor instantiates the underlying **System.Net.Sockets.IPEndPoint** of **System.Net.Sockets.TcpListener** using the specified IP address and port number. If you call

System.Net.Sockets.TcpListener.Start , **System.Net.Sockets.TcpListener** listens for connections using the underlying endpoint. The local IP address to listen to. The port on which to listen. If this is set to 0, a port number will be selected at random.

Active

ToString

1
2 [C#] protected bool Active {get;}

3 [C++] protected: __property bool get_Active();

4 [VB] Protected ReadOnly Property Active As Boolean

5 [JScript] protected function get Active() : Boolean;

6
7 *Description*

8 Gets or Sets a value that indicates whether

9 **System.Net.Sockets.TcpListener** is actively listening for client connections.

10 LocalEndpoint

11 ToString

12
13 [C#] public EndPoint LocalEndpoint {get;}

14 [C++] public: __property EndPoint* get_LocalEndpoint();

15 [VB] Public ReadOnly Property LocalEndpoint As EndPoint

16 [JScript] public function get LocalEndpoint() : EndPoint;

17
18 *Description*

19 Gets the underlying **System.Net.Sockets.EndPoint** of

20 **System.Net.Sockets.TcpListener** .

21 Server

22 ToString

23
24 [C#] protected Socket Server {get;}

25 [C++] protected: __property Socket* get_Server();

1 [VB] Protected ReadOnly Property Server As Socket

2 [JScript] protected function get Server() : Socket;

3
4 *Description*

5 Used by the class to get or set the underlying network socket.

6 Use this property to get the underlying **System.Net.Sockets.Socket**
7 instance of **System.Net.Sockets.TcpListener** .

8 AcceptSocket

9
10 [C#] public Socket AcceptSocket();

11 [C++] public: Socket* AcceptSocket();

12 [VB] Public Function AcceptSocket() As Socket

13 [JScript] public function AcceptSocket() : Socket;

14
15 *Description*

16 Accepts a pending connection request.

17 *Return Value:* A **System.Net.Sockets.Socket** instance to handle the incoming
18 connection request.

19 **System.Net.Sockets.TcpListener.AcceptSocket** returns a
20 **System.Net.Sockets.Socket** instance used to facilitate communication with the
21 connecting client. This **System.Net.Sockets.Socket** is initialized with the IP
22 Address and port number of the connecting client. You can use any of the
23 **System.Net.Sockets.Socket.Send(System.Byte[],System.Int32,System.Net.Sockets.SocketFlags)** and
24 **System.Net.Sockets.Socket.Receive(System.Byte[],System.Int32,System.Net.Sockets.SocketFlags)**
25

ockets.SocketFlags) methods available in the **System.Net.Sockets.Socket** class to facilitate communication.

AcceptTcpClient

[C#] public TcpClient AcceptTcpClient();

[C++] public: TcpClient* AcceptTcpClient();

[VB] Public Function AcceptTcpClient() As TcpClient

[JScript] public function AcceptTcpClient() : TcpClient;

Description

Accepts a pending connection request

Return Value: A **System.Net.Sockets.TcpClient** instance to handle the incoming connection request.

System.Net.Sockets.TcpListener.AcceptTcpClient returns **System.Net.Sockets.TcpClient** instance used to facilitate communication with the connecting client. Use **System.Net.Sockets.TcpClient.GetStream** to obtain the underlying **System.Net.Sockets.NetworkStream** instance of **System.Net.Sockets.TcpClient** . You can use this **System.Net.Sockets.TcpClient.NetworkStream** to facilitate communication with the client.

Finalize

[C#] ~TcpListener();

[C++] ~TcpListener();

[VB] Overrides Protected Sub Finalize()

1 [JScript] protected override function Finalize();

3 *Description*

4 Frees resources used by the **System.Net.Sockets.TcpClient** class.

5 The finalizer for the **System.Net.Sockets.TcpListener** class calls the
6 **System.Net.Sockets.TcpListener.Stop** method to free the underlying
7 **System.Net.Sockets.Socket** .

8 Pending

10 [C#] public bool Pending();

11 [C++] public: bool Pending();

12 [VB] Public Function Pending() As Boolean

13 [JScript] public function Pending() : Boolean;

15 *Description*

16 Determine if there are pending connection requests.

17 *Return Value:* **true** if connections are pending; otherwise, **false** .

18 Before **System.Net.Sockets.TcpListener** can poll for client connection
19 attempts, it must first initialize its underlying **System.Net.Sockets.Socket** instance
20 to listen for incoming connection requests. The way you inititalize the underlying
21 **System.Net.Sockets.Socket** is by calling the
22 **System.Net.Sockets.TcpListener.Start** method.

23 Start

25 [C#] public void Start();

1 [C++] public: void Start();

2 [VB] Public Sub Start()

3 [JScript] public function Start();

4
5 *Description*

6 Starts listening to network requests.

7 **System.Net.Sockets.TcpListener.Start** initializes the underlying

8 **System.Net.Sockets.Socket** instance. After this initialization,

9 **System.Net.Sockets.Start** does the following: Binds the underlying

10 **System.Net.Sockets.Socket** instance using the underlying

11 **System.Net.Sockets.IPEndPoint** instance Begins listening for client connections

12 by calling the **System.Net.Sockets.Socket.Listen(System.Int32)** method of the

13 underlying **System.Net.Sockets.Socket** instance.

14 Stop

15
16 [C#] public void Stop();

17 [C++] public: void Stop();

18 [VB] Public Sub Stop()

19 [JScript] public function Stop();

20
21 *Description*

22 Closes the network connection.

23 Close closes the network connection.

24 UdpClient class (System.Net.Sockets)

25 ToString

1
2
3 *Description*

4 Provides UDP (User Datagram Protocol) network services.

5 The **System.Net.Sockets.UdpClient** class builds upon the
6 **System.Net.Sockets.Socket** class to provide UDP services at a higher level of
7 abstraction. Because UDP is a connectionless transport protocol, you do not need
8 to establish a remote host connection prior to sending and receiving data. You do
9 however, have the option to establish a **System.Net.Sockets.UdpClient**
10 connection with a remote host using one of the following ways.

11 UdpClient

12 *Example Syntax:*

13 ToString

14
15 [C#] public UdpClient();

16 [C++] public: UdpClient();

17 [VB] Public Sub New()

18 [JScript] public function UdpClient(); Initializes a new instance of the

19 **System.Net.Sockets.UdpClient** class.
20

21 *Description*

22 Initializes a new instance of the **System.Net.Sockets.UdpClient** class.

23 The default constructor sets the IP address to **System.Net.IPAddress.Any**
24 and the port number to 0.

25 UdpClient

Example Syntax:

ToString

```
[C#] public UdpClient(int port);  
[C++] public: UdpClient(int port);  
[VB] Public Sub New(ByVal port As Integer)  
[JScript] public function UdpClient(port : int);
```

Description

Initializes a new instance of the **System.Net.Sockets.UdpClient** class that communicates on a specified port.

The *port* parameter specifies the local port number on which you intend to communicate. This constructor instantiates an underlying **System.Net.Sockets.Socket** and binds that **System.Net.Sockets.Socket** using the provided port number. This constructor configures the underlying **System.Net.Sockets.Socket** to use the default local network interface for communication. The local port number from which you intend to communicate.

UdpClient

Example Syntax:

ToString

```
[C#] public UdpClient(IPEndPoint localEP);  
[C++] public: UdpClient(IPEndPoint* localEP);  
[VB] Public Sub New(ByVal localEP As IPEndPoint)  
[JScript] public function UdpClient(localEP : IPEndPoint);
```

Description

Initializes a new instance of the **System.Net.Sockets.UdpClient** class that communicates on a specified local endpoint.

The *localEP* parameter specifies the local end point. This constructor instantiates a socket and binds that socket to the local end point provided. The local endpoint to which you bind the Udp connection.

UdpClient

Example Syntax:

ToString

```
[C#] public UdpClient(string hostname, int port);
```

```
[C++] public: UdpClient(String* hostname, int port);
```

```
[VB] Public Sub New(ByVal hostname As String, ByVal port As Integer)
```

```
[JScript] public function UdpClient(hostname : String, port : int);
```

Description

Initializes a new instance of the **System.Net.Sockets.UdpClient** class and connects to a specified remote host on a specified port.

This constructor accepts two parameters. The remote host name to which you intend to connect The remote port number to which you intend to connect

Active

ToString

```
[C#] protected bool Active {get; set;}
```


1 [C++] protected: __property bool get _Active();protected: __property void
2 set _Active(bool);

3 [VB] Protected Property Active As Boolean

4 [JScript] protected function get Active() : Boolean;protected function set
5 Active(Boolean);

6
7 *Description*

8 Gets or sets a value indicating whether a connection to a remote host has
9 been made.

10 Client

11 ToString

12
13 [C#] protected Socket Client {get; set;}

14 [C++] protected: __property Socket* get _Client();protected: __property void
15 set _Client(Socket*);

16 [VB] Protected Property Client As Socket

17 [JScript] protected function get Client() : Socket;protected function set
18 Client(Socket);

19
20 *Description*

21 Gets or sets the underlying network socket.

22 **System.Net.Sockets.UdpClient** creates a **System.Net.Sockets.Socket**
23 instance to handle the actual sending and receiving of data over a network.

24 Close

1
2 [C#] public void Close();

3 [C++] public: void Close();

4 [VB] Public Sub Close()

5 [JScript] public function Close();

6
7 *Description*

8 Closes the UDP connection.

9 **System.Net.Sockets.TcpClient.Close** disposes the UDP connection.

10 Connect

11
12 [C#] public void Connect(IPEndPoint endPoint);

13 [C++] public: void Connect(IPEndPoint* endPoint);

14 [VB] Public Sub Connect(ByVal endPoint As IPEndPoint)

15 [JScript] public function Connect(endPoint : IPEndPoint);

16
17 *Description*

18 Connects the client to a remote UDP host using the specified remote
19 network endpoint.

20 **System.Net.Sockets.UdpClient.Connect(System.String,System.Int32)**

21 establishes a UDP connection to the host using the specified

22 **System.Net.IPEndPoint** . The network endpoint to which you intend to connect.

23 Connect

24
25 [C#] public void Connect(IPAddress addr, int port);

1 [C++] public: void Connect(IPAddress* addr, int port);

2 [VB] Public Sub Connect(ByVal addr As IPAddress, ByVal port As Integer)

3 [JScript] public function Connect(addr : IPAddress, port : int);

4
5 *Description*

6 Connects the client to a remote UDP host using the specified IP Address
7 and port number.

8 **System.Net.Sockets.TcpClient.Connect(System.String, System.Int32)**
9 establishes a UDP connection using the port and IP address specified. This method
10 establishes a connection by calling the
11 **System.Net.Sockets.Socket.Connect(System.Net.EndPoint)** method of the
12 underlying **System.Net.Sockets.Socket** instance. After a connection is
13 established, you can use the
14 **System.Net.Sockets.UdpClient.Send(System.Byte[], System.Int32, System.Net.I**
15 **PEndPoint)** and
16 **System.Net.Sockets.UdpClient.Receive(System.Net.IPEndPoint@)** methods to
17 communicate with the remote host. IP address of the host to which you intend to
18 connect. The port number to which you intend to connect.

19 **Connect**

20
21 [C#] public void Connect(string hostname, int port);

22 [C++] public: void Connect(String* hostname, int port);

23 [VB] Public Sub Connect(ByVal hostname As String, ByVal port As Integer)

24 [JScript] public function Connect(hostname : String, port : int); Establishes a
25 connection to a remote host.

1
2 *Description*

3 Establishes a connection to the specified port on the specified remote host.

4 **System.Net.Sockets.TcpClient.Connect(System.String,System.Int32)**

5 establishes a UDP connection to the host machine using the specified *port* and

6 *hostname* . This method establishes a connection by calling the

7 **System.Net.Sockets.Socket.Connect(System.Net.EndPoint)** method of the

8 underlying **System.Net.Sockets.Socket** instance. Once a connection is

9 established, you can use the

10 **System.Net.Sockets.UdpClient.Send(System.Byte[],System.Int32,System.Net.I**

11 **PEndPoint)** and

12 **System.Net.Sockets.UdpClient.Receive(System.Net.IPEndPoint@)** methods to

13 communicate with the remote host. Name of the remote host to which you intend

14 to connect. Port number on the remote host to which you intend to connect.

15 **DropMulticastGroup**

16
17 [C#] public void DropMulticastGroup(IPAddress multicastAddr);

18 [C++] public: void DropMulticastGroup(IPAddress* multicastAddr);

19 [VB] Public Sub DropMulticastGroup(ByVal multicastAddr As IPAddress)

20 [JScript] public function DropMulticastGroup(multicastAddr : IPAddress);

21
22 *Description*

23 Leaves a multicast group.

24 **System.Net.Sockets.UdpClient.DropMulticastGroup(System.Net.IPAd**

25 **dress)** disassociates a **System.Net.Sockets.UdpClient** instance with a multicast

group. In order to remove the **System.Net.Sockets.UdpClient** instance from a multicast group, you must call

System.Net.Sockets.UdpClient.DropMulticastGroup(System.Net.IPAddress)

using the **System.Net.Sockets.IPAddress** of the group from which you intend to withdrawal. The **System.Net.IPAddress** of the multicast group to leave.

JoinMulticastGroup

[C#] public void JoinMulticastGroup(IPAddress multicastAddr);

[C++] public: void JoinMulticastGroup(IPAddress* multicastAddr);

[VB] Public Sub JoinMulticastGroup(ByVal multicastAddr As IPAddress)

[JScript] public function JoinMulticastGroup(multicastAddr : IPAddress); Adds a **System.Net.Sockets.UdpClient** to a multicast group.

Description

Adds a **System.Net.Sockets.UdpClient** to a multicast group.

System.Net.Sockets.UdpClient.JoinMulticastGroup(System.Net.IPAddress) associates the **System.Net.Sockets.UdpClient** instance with a multicast group. In order to receive data from this group, you must call

System.Net.Sockets.UdpClient.JoinMulticastGroup(System.Net.IPAddress) using the **System.Net.Sockets.IPAddress** of the group to which you intend to join. The multicast **System.Net.Sockets.IPAddress** of the group you wish to join.

JoinMulticastGroup

[C#] public void JoinMulticastGroup(IPAddress multicastAddr, int timeToLive);

[C++] public: void JoinMulticastGroup(IPAddress* multicastAddr, int

timeToLive);

[VB] Public Sub JoinMulticastGroup(ByVal multicastAddr As IPAddress, ByVal

timeToLive As Integer)

[JScript] public function JoinMulticastGroup(multicastAddr : IPAddress,

timeToLive : int);

Description

Adds a **System.Net.Sockets.UdpClient** to a multicast group with the specified Time to Live (TTL).

System.Net.Sockets.UdpClient.JoinMulticastGroup(System.Net.IPAddress) associates the **System.Net.Sockets.UdpClient** instance with a multicast group. This overload requires two parameters. The **System.Net.IPAddress** of the multicast group to join. The Time to Live (TTL)

Receive

[C#] public byte[] Receive(ref IPEndPoint remoteEP);

[C++] public: unsigned char Receive(IPEndPoint** remoteEP) __gc[];

[VB] Public Function Receive(ByRef remoteEP As IPEndPoint) As Byte()

[JScript] public function Receive(remoteEP : IPEndPoint) : Byte[];

Description

Returns a UDP datagram that was sent by a remote host.

Return Value: An array of 8-bit unsigned integers that contains the datagram data.

An **System.Net.IPEndPoint** representing the remote host from which the data was sent.

Send

```
[C#] public int Send(byte[] dgram, int bytes);  
[C++] public: int Send(unsigned char dgram __gc[], int bytes);  
[VB] Public Function Send(ByVal dgram() As Byte, ByVal bytes As Integer) As  
Integer  
[JScript] public function Send(dgram : Byte[], bytes : int) : int;
```

Description

Sends a UDP datagram to a remote host.

Return Value: The number of bytes sent.

System.Net.Sockets.UdpClient.Send(System.Byte[],System.Int32,System.Net.IPEndPoint) sends the provided datagram to a remote host. Before using **System.Net.Sockets.UdpClient.Send(System.Byte[],System.Int32,System.Net.IPEndPoint)**, you must first use **System.Net.Sockets.UdpClient.Connect(System.String,System.Int32)** to establish a remote host connection. The UDP datagram that you intend to send. The number of bytes in the datagram.

Send

```
[C#] public int Send(byte[] dgram, int bytes, IPEndPoint endPoint);  
[C++] public: int Send(unsigned char dgram __gc[], int bytes, IPEndPoint*  
endPoint);  
[VB] Public Function Send(ByVal dgram() As Byte, ByVal bytes As Integer,  
ByVal endPoint As IPEndPoint) As Integer
```

1 [JScript] public function Send(dgram : Byte[], bytes : int, endPoint : IPEndPoint) :
2 int; Sends a UDP datagram to a remote host.

3
4 *Description*

5 Sends a UDP datagram to the host that is at the remote endpoint.

6 *Return Value:* The number of bytes sent.

7 The

8 **System.Net.Sockets.UdpClient.Send(System.Byte[],System.Int32,System.Net.I**
9 **PEndPoint)** method establishes a UDP connection to the remote host using the
10 specified **System.Net.IPEndPoint** , and then sends the datagram. The UDP
11 datagram to send. The number of bytes in the datagram. An
12 **System.Net.IPEndPoint** that represents the host and port to which to send the
13 datagram.

14 Send

15
16 [C#] public int Send(byte[] dgram, int bytes, string hostname, int port);

17 [C++] public: int Send(unsigned char dgram __gc[], int bytes, String* hostname,
18 int port);

19 [VB] Public Function Send(ByteVal dgram() As Byte, ByteVal bytes As Integer,
20 ByteVal hostname As String, ByteVal port As Integer) As Integer

21 [JScript] public function Send(dgram : Byte[], bytes : int, hostname : String, port :
22 int) : int;

23
24 *Description*

Sends a UDP datagram to a specified port on a specified remote host.

Return Value: The number of bytes sent.

System.Net.Sockets.UdpClient.Send(System.Byte[],System.Int32,System.Net.IPEndPoint) establishes a UDP connection to the specified host and port and then sends the datagram. The data is sent by calling the **System.Net.Sockets.Socket.SendTo(System.Byte[],System.Int32,System.Int32, System.Net.Sockets.SocketFlags,System.Net.EndPoint)** method of the underlying **System.Net.Sockets.Socket** instance. The UDP datagram to send.

SYSTEM.SECURITY NAMESPACE

The **System.Security** namespace provides the underlying structure of the security system, including base classes for permissions. Cryptographic classes in the namespace are integrated with streams, allowing the classes to be used with file or network I/O seamlessly. Additionally, security is made available due to isolated storage that allows code running with restricted permissions to use its own private file system. Furthermore, a role-based user identity programming model is unified across different underlying authentication technologies, enabling applications to write to a single API that works for all the authentication technologies. As part of this role-based user identity programming model, an **IIdentity** interface defines the basic functionality of an identity object (which represents the user on whose behalf the code is running), and an **IPrincipal** interface defines the basic functionality of a principal object (which represents the security context of the user on whose behalf the code is running, including that user's identity (**IIdentity**) and any roles to which the user belongs).

1 The System.Security namespace includes a System.Security.Cryptography
2 namespace, a System.Security.Cryptography.X509Certificates namespace, a
3 System.Security.Cryptography.Xml namespace, a System.Security.Permissions
4 namespace, a System.Security.Policy namespace, and a System.Security.Principal
5 namespace.

6 The System.Security.Cryptography namespace provides cryptographic
7 services, including secure encoding and decoding of data, as well as many other
8 operations, such as hashing, random number generation, and message
9 authentication. The System.Security.Cryptography.X509Certificates namespace
10 contains the common language runtime implementation of the Authenticode X.509
11 v.3 certificate. This certificate is signed with a private key, uniquely and
12 positively identifying the holder of the certificate. The
13 System.Security.Cryptography.Xml namespace contains an XML model for use
14 within the .net framework security system, allowing XML objects to be signed
15 with a digital signature.

16 The System.Security.Permissions namespace defines classes that control
17 access to operations and resources based on policy. The System.Security.Policy
18 namespace contains three types of classes: code groups, membership conditions,
19 and evidence. These three types of classes are used to create the rules applied by
20 the common language runtime security policy system. Evidence classes are the
21 input to security policy and membership conditions are the switches; together
22 these create policy statements and determine the granted permission set. Policy
23 levels and code groups are the structure of the policy hierarchy. Code groups are
24 the encapsulation of a rule and are arranged hierarchically in a policy level. The
25

1 System.Security.Principal namespace defines a principal object that represents the
2 security context under which code is running.

3 4 SYSTEM.MANAGEMENT NAMESPACE

5 The System.Management namespace includes numerous objects and
6 methods that enable rich management through late binding to WMI providers.
7 Various management functionality and capacity is made available, including
8 standard querying on management data, events-publication/subscription,
9 management data retrieval, method invocation (system reboots, process kill, etc.),
10 system/application configuration, discoverability through common schema,
11 support for management relationship hierarchies, etc.

12 Numerous objects representing management instrumentation are accessible
13 through the System.Management namespace (which includes the
14 System.Management.Instrumentation namespace), from configuration to events
15 that can be consumed by .NET clients to manage devices. The
16 System.Management namespace exposes multiple classes (e.g.,
17 ManagementObject() and ManagementObjectSearcher(), etc.) that allow client
18 devices to query and enumerate through management classes and invoke methods,
19 write configurations, subscribe for events, etc. Examples of this functionality
20 include: SNMP management (traps, etc.); WDM management (windows drivers);
21 MSI management (windows installer); DS management (directory services);
22 Security settings management; Network Adapters/bindings management;
23 Computer System management; Memory, CPU, Processor, and Disks
24 management; File and directory management; Application management; System
25 Device management; and so forth.

SYSTEM.SERVICEPROCESS NAMESPACE

As discussed above, the System.ServiceProcess namespace contains classes that allow developers to install and run services. These allow services (e.g., Windows NT® operating system services) to be written, installed, and run relatively easily. These also allow custom installation actions for services to be packaged into assemblies, easing the installation process.

SYSTEM.RUNTIME.SERIALIZATION NAMESPACE

The System.Runtime.Serialization namespace contains classes that can be used for serializing and deserializing objects in a relatively simple manner. Serialization is the process of converting an object or a graph of objects into a linear sequence of bytes for either storage or transmission to another location. Deserialization is the process of taking in stored information and recreating objects from it. An ISerializable interface provides a way for classes to control their own serialization behavior. The System.Runtime.Serialization namespace includes three additional namespaces: the System.Runtime.Serialization.Formatter namespace (which contains common enumerations, interfaces and classes that are used by serialization formatters), the System.Runtime.Serialization.Formatter.Binary namespace (which contains a BinaryFormatter class that can be used to serialize and deserialize objects in binary format), and the System.Runtime.Serialization.Formatter.Soap namespace (which contains a SoapFormatter class that can be used to serialize and deserialize objects in the SOAP format).

SYSTEM.MESSAGING NAMESPACE

The System.Messaging namespace provides classes that allow connecting to message queues on the network, sending messages to queues, receiving messages from queues, and peeking at (reading without removing) messages from queues. A MessageQueue class supports both synchronous and asynchronous retrieval of messages from a queue. Peek and Receive methods on the MessageQueue class interrupt processing until a message is available in the queue (or until a specified timeout expires), while BeginPeek and BeginReceive methods on the MessageQueue class allow processing to continue and use event notification or callbacks to indicate that a message exists or has arrived in the queue. MessageQueue use an internal connection cache (or pool), allowing repeated instantiation of MessageQueue to bind to the same queue very quickly. Additionally, any object can be sent or received as a message, and the object on the server and client can be of a different type (as long as the schemas are the same).

The MessageQueue class and Message class are the primary classes that provide the functionality for message queuing. MessageQueue provides a means for getting and setting queue properties and default message properties, as well as initiating message send, peek, or receive operations. MessageQueue also provides support for transactional message processing. The Message class is used to peek or receive messages from a queue, or to have fine control over message properties when sending a message to a queue.

SYSTEM.DIAGNOSTICS NAMESPACE

As discussed above, the System.Diagnostics namespace contains classes that are used to debug applications and to trace code execution, as well as start system processes, read and write to event logs, and monitor system performance. These classes allow, for example, easy publishing of performance counter data and writing to event logs (e.g., without having to generate separate dll's in order to do so). A Trace class contains a set of methods and properties that help a developer trace the execution of code. A Debug class contains a set of methods and properties that help a developer debug code. A Process class enables access to local and remote processes, allowing a developer to start and stop local system processes. An EventLog class enables interaction with Windows® operating systems event logs, which record information about important software or hardware events. A PerformanceCounter class represents a Windows NT® operating system performance counter component that can be used for both reading existing predefined or custom counters and publishing (writing) performance data to custom counters.

EXEMPLARY COMPUTING SYSTEM AND ENVIRONMENT

Fig. 4 illustrates an example of a suitable computing environment 400 within which the programming framework 132 may be implemented (either fully or partially). The computing environment 400 may be utilized in the computer and network architectures described herein.

The exemplary computing environment 400 is only one example of a computing environment and is not intended to suggest any limitation as to the scope of use or functionality of the computer and network architectures. Neither should the computing environment 400 be interpreted as having any dependency

1 or requirement relating to any one or combination of components illustrated in the
2 exemplary computing environment 400.

3 The framework 132 may be implemented with numerous other general
4 purpose or special purpose computing system environments or configurations.
5 Examples of well known computing systems, environments, and/or configurations
6 that may be suitable for use include, but are not limited to, personal computers,
7 server computers, multiprocessor systems, microprocessor-based systems, network
8 PCs, minicomputers, mainframe computers, distributed computing environments
9 that include any of the above systems or devices, and so on. Compact or subset
10 versions of the framework may also be implemented in clients of limited
11 resources, such as cellular phones, personal digital assistants, handheld computers,
12 or other communication/computing devices.

13 The framework 132 may be described in the general context of computer-
14 executable instructions, such as program modules, being executed by one or more
15 computers or other devices. Generally, program modules include routines,
16 programs, objects, components, data structures, etc. that perform particular tasks
17 or implement particular abstract data types. The framework 132 may also be
18 practiced in distributed computing environments where tasks are performed by
19 remote processing devices that are linked through a communications network. In
20 a distributed computing environment, program modules may be located in both
21 local and remote computer storage media including memory storage devices.

22 The computing environment 400 includes a general-purpose computing
23 device in the form of a computer 402. The components of computer 402 can
24 include, by are not limited to, one or more processors or processing units 404, a
25

1 system memory 406, and a system bus 408 that couples various system
2 components including the processor 404 to the system memory 406.

3 The system bus 408 represents one or more of several possible types of bus
4 structures, including a memory bus or memory controller, a peripheral bus, an
5 accelerated graphics port, and a processor or local bus using any of a variety of
6 bus architectures. By way of example, such architectures can include an Industry
7 Standard Architecture (ISA) bus, a Micro Channel Architecture (MCA) bus, an
8 Enhanced ISA (EISA) bus, a Video Electronics Standards Association (VESA)
9 local bus, and a Peripheral Component Interconnects (PCI) bus also known as a
10 Mezzanine bus.

11 Computer 402 typically includes a variety of computer readable media.
12 Such media can be any available media that is accessible by computer 402 and
13 includes both volatile and non-volatile media, removable and non-removable
14 media.

15 The system memory 406 includes computer readable media in the form of
16 volatile memory, such as random access memory (RAM) 410, and/or non-volatile
17 memory, such as read only memory (ROM) 412. A basic input/output system
18 (BIOS) 414, containing the basic routines that help to transfer information
19 between elements within computer 402, such as during start-up, is stored in ROM
20 412. RAM 410 typically contains data and/or program modules that are
21 immediately accessible to and/or presently operated on by the processing unit 404.

22 Computer 402 may also include other removable/non-removable,
23 volatile/non-volatile computer storage media. By way of example, Fig. 4
24 illustrates a hard disk drive 416 for reading from and writing to a non-removable,
25 non-volatile magnetic media (not shown), a magnetic disk drive 418 for reading

1 from and writing to a removable, non-volatile magnetic disk 420 (e.g., a “floppy
2 disk”), and an optical disk drive 422 for reading from and/or writing to a
3 removable, non-volatile optical disk 424 such as a CD-ROM, DVD-ROM, or other
4 optical media. The hard disk drive 416, magnetic disk drive 418, and optical disk
5 drive 422 are each connected to the system bus 408 by one or more data media
6 interfaces 426. Alternatively, the hard disk drive 416, magnetic disk drive 418,
7 and optical disk drive 422 can be connected to the system bus 408 by one or more
8 interfaces (not shown).

9 The disk drives and their associated computer-readable media provide non-
10 volatile storage of computer readable instructions, data structures, program
11 modules, and other data for computer 402. Although the example illustrates a
12 hard disk 416, a removable magnetic disk 420, and a removable optical disk 424,
13 it is to be appreciated that other types of computer readable media which can store
14 data that is accessible by a computer, such as magnetic cassettes or other magnetic
15 storage devices, flash memory cards, CD-ROM, digital versatile disks (DVD) or
16 other optical storage, random access memories (RAM), read only memories
17 (ROM), electrically erasable programmable read-only memory (EEPROM), and
18 the like, can also be utilized to implement the exemplary computing system and
19 environment.

20 Any number of program modules can be stored on the hard disk 416,
21 magnetic disk 420, optical disk 424, ROM 412, and/or RAM 410, including by
22 way of example, an operating system 426, one or more application programs 428,
23 other program modules 430, and program data 432. Each of the operating system
24 426, one or more application programs 428, other program modules 430, and
25

1 program data 432 (or some combination thereof) may include elements of the
2 programming framework 132.

3 A user can enter commands and information into computer 402 via input
4 devices such as a keyboard 434 and a pointing device 436 (e.g., a "mouse").
5 Other input devices 438 (not shown specifically) may include a microphone,
6 joystick, game pad, satellite dish, serial port, scanner, and/or the like. These and
7 other input devices are connected to the processing unit 404 via input/output
8 interfaces 440 that are coupled to the system bus 408, but may be connected by
9 other interface and bus structures, such as a parallel port, game port, or a universal
10 serial bus (USB).

11 A monitor 442 or other type of display device can also be connected to the
12 system bus 408 via an interface, such as a video adapter 444. In addition to the
13 monitor 442, other output peripheral devices can include components such as
14 speakers (not shown) and a printer 446 which can be connected to computer 402
15 via the input/output interfaces 440.

16 Computer 402 can operate in a networked environment using logical
17 connections to one or more remote computers, such as a remote computing device
18 448. By way of example, the remote computing device 448 can be a personal
19 computer, portable computer, a server, a router, a network computer, a peer device
20 or other common network node, and so on. The remote computing device 448 is
21 illustrated as a portable computer that can include many or all of the elements and
22 features described herein relative to computer 402.

23 Logical connections between computer 402 and the remote computer 448
24 are depicted as a local area network (LAN) 450 and a general wide area network
25

1 (WAN) 452. Such networking environments are commonplace in offices,
2 enterprise-wide computer networks, intranets, and the Internet.

3 When implemented in a LAN networking environment, the computer 402 is
4 connected to a local network 450 via a network interface or adapter 454. When
5 implemented in a WAN networking environment, the computer 402 typically
6 includes a modem 456 or other means for establishing communications over the
7 wide network 452. The modem 456, which can be internal or external to computer
8 402, can be connected to the system bus 408 via the input/output interfaces 440 or
9 other appropriate mechanisms. It is to be appreciated that the illustrated network
10 connections are exemplary and that other means of establishing communication
11 link(s) between the computers 402 and 448 can be employed.

12 In a networked environment, such as that illustrated with computing
13 environment 400, program modules depicted relative to the computer 402, or
14 portions thereof, may be stored in a remote memory storage device. By way of
15 example, remote application programs 458 reside on a memory device of remote
16 computer 448. For purposes of illustration, application programs and other
17 executable program components such as the operating system are illustrated herein
18 as discrete blocks, although it is recognized that such programs and components
19 reside at various times in different storage components of the computing device
20 402, and are executed by the data processor(s) of the computer.

21 An implementation of the framework 132, and particularly, the API 142 or
22 calls made to the API 142, may be stored on or transmitted across some form of
23 computer readable media. Computer readable media can be any available media
24 that can be accessed by a computer. By way of example, and not limitation,
25 computer readable media may comprise "computer storage media" and

1 “communications media.” “Computer storage media” include volatile and non-
2 volatile, removable and non-removable media implemented in any method or
3 technology for storage of information such as computer readable instructions, data
4 structures, program modules, or other data. Computer storage media includes, but
5 is not limited to, RAM, ROM, EEPROM, flash memory or other memory
6 technology, CD-ROM, digital versatile disks (DVD) or other optical storage,
7 magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage
8 devices, or any other medium which can be used to store the desired information
9 and which can be accessed by a computer.

10 “Communication media” typically embodies computer readable
11 instructions, data structures, program modules, or other data in a modulated data
12 signal, such as carrier wave or other transport mechanism. Communication media
13 also includes any information delivery media. The term “modulated data signal”
14 means a signal that has one or more of its characteristics set or changed in such a
15 manner as to encode information in the signal. By way of example, and not
16 limitation, communication media includes wired media such as a wired network or
17 direct-wired connection, and wireless media such as acoustic, RF, infrared, and
18 other wireless media. Combinations of any of the above are also included within
19 the scope of computer readable media.

20 Alternatively, portions of the framework may be implemented in hardware
21 or a combination of hardware, software, and/or firmware. For example, one or
22 more application specific integrated circuits (ASICs) or programmable logic
23 devices (PLDs) could be designed or programmed to implement one or more
24 portions of the framework.
25

1 **Conclusion**

2 Although the invention has been described in language specific to structural
3 features and/or methodological acts, it is to be understood that the invention
4 defined in the appended claims is not necessarily limited to the specific features or
5 acts described. Rather, the specific features and acts are disclosed as exemplary
6 forms of implementing the claimed invention.

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